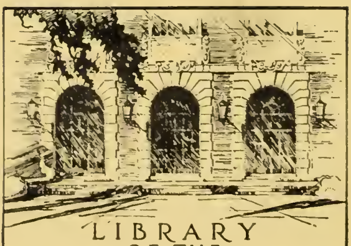
Class Gen. Lib. *Book*
University of Chicago Libraries
GIVEN BY
U. S. GOVERNMENT

Besides the main topic this book also treats of

Subject No.	*On page*	*Subject No.*	*On page*

CARDS MADE



LIBRARY
OF THE
UNIVERSITY
OF ILLINOIS

614.09
Un32b
no.84
~~BIOLOGY~~ cop. 3

JAN 10 1941

TREASURY DEPARTMENT

Public Health and Marine-Hospital Service of the United States

---

HYGIENIC LABORATORY—BULLETIN No. 84

MAY, 1912

DIGEST OF COMMENTS
ON THE
PHARMACOPŒIA OF THE UNITED STATES OF AMERICA
[*EIGHTH DECENNIAL REVISION*]
AND ON THE
NATIONAL FORMULARY
[*THIRD EDITION*]

FOR THE CALENDAR YEAR ENDING DECEMBER 31

1910

BY

MURRAY GALT MOTTER

AND

MARTIN I. WILBERT

WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

RA11.B21
no.87.

614.09
Un32b
no. 84
cop. 3

~~369163~~ Withdrawn

8 Jan 1941

ORGANIZATION OF HYGIENIC LABORATORY.

Rupert Blue, *Surgeon General.*

United States Public Health and Marine-Hospital Service.

ADVISORY BOARD.

Lieut. Col. Walter D. McCaw, surgeon, United States Army; Surg. Charles S. Butler, United States Navy; Dr. A. D. Melvin, Chief of United States Bureau of Animal Industry, and John F. Anderson, United States Public Health and Marine-Hospital Service, ex officio.

Prof. William H. Welch, Johns Hopkins University, Baltimore, Md.; Prof. Simon Flexner, Rockefeller Institute for Medical Research, New York; Prof. Victor C. Vaughan, University of Michigan, Ann Arbor, Mich.; Prof William T. Sedgwick, Massachusetts Institute of Technology, Boston, Mass.; and Prof. Frank F. Wesbrook, University of Minnesota, Minneapolis, Minn.

LABORATORY CORPS.

Director.—Passed Asst. Surg. John F. Anderson.
Assistant director.—Passed Asst. Surg. Edward Francis.
Senior pharmacist.—L. W. Ryder.
Junior pharmacist.—C. O. Sterns, Ph. G.
Artist.—Leonard H. Wilder.
Acting librarian.—E. B. K. Foltz.

DIVISION OF PATHOLOGY AND BACTERIOLOGY.

In charge of division.—Passed Asst. Surg. John F. Anderson.

Assistants.—Passed Asst. Surgs. Edward Francis, L. L. Lumsden, T. B. McClintic, J. W. Schereschewsky, Allan J. McLaughlin, B. S. Warren, A. M. Stimson, W. H. Frost; Asst. Surgs. Joseph R. Ridlon, S. C. Hotchkiss, J. P. Leake; and Walter D. Cannon, A. M., M. D.

DIVISION OF ZOOLOGY.

Professor of zoology.—Ch. Wardell Stiles, Ph. D.
Assistant.—Passed Asst. Surg. Joseph Goldberger.

DIVISION OF PHARMACOLOGY.

Professor of pharmacology.—Reid Hunt, Ph. D., M. D.

Assistants.—Atherton Seidell, Ph. D.; W. H. Schultz, Ph. D.; Worth Hale, A. B., M. D.; Murray Galt Motter, A. M., M. D.; Martin I. Wilbert, Ph. M.; G. A. Menge, Ph. D.

DIVISION OF CHEMISTRY.

Professor of chemistry.—Edward C. Franklin, Ph. D.
Assistants.—Passed Asst. Surg. Norman Roberts; Elias Elvove, M. S. Phar. D.

1116719

Digitized by the Internet Archive
in 2015

https://archive.org/details/nationalinstitut8419unit

TABLE OF CONTENTS.

Page.
Preface 9

List of literature reviewed:

1. Title abbreviations—Journals 13
2. Title abbreviations—Pharmacopœias 19

I. General comments:

1. Legal status and development:

1. Pure food and drugs law 21
2. Poisons and narcotics 26
3. The Pharmacopœia as a legal standard 27
4. Supplement to the Pharmacopœia 30
5. United States Pharmacopœial Convention 32
    Decennial meeting of 1910 32
    Comments on 38
6. General principles to be followed in revising the Pharmacopœia 42
    Comments on general principles 48
7. Publication and control 50
8. The Physician and the Pharmacopœia 52
9. The Pharmacopœia as a text book 58
10. U. S. P. Convention representation 60
11. Value of criticism 62
12. Committee of Revision 63
13. Nature and progress of revision 68

2. Scope:

1. Nature and content of the Pharmacopœia 69
2. Nomenclature 78
3. Cost and size 85
4. Publicity 87
5. Time of publication 90
6. Doses 91
7. Antidotes 94
8. Weights and measures 95
9. Object and uses 97
10. Additions and deletions 101
11. Purity and strength 104
12. Atomic weights 106
13. Chemical formulas 108

3. Nonpharmacopœial standards:

1. National Formulary 109
    Receipt book 113
2. New and nonofficial remedies 113
    Synthetics 114
    New remedies 115
    Patents and trade marks 119

I. General comments—Continued. Page.
4. Analytical data........ 121
  1. Adulterations........ 122
  2. Reagents........ 123
  3. Indicators........ 125
  4. Physical constants........ 126
    Specific gravity........ 127
    Solubilities........ 129
    Melting point determinations........ 131
    Boiling point determinations........ 133
    Thermometry........ 134
    Polarization and refraction........ 136
  5. Apparatus........ 138
  6. Filters........ 141
  7. Color standards and colors........ 141
  8. Analytical methods and results........ 143
  9. Chemical constants........ 146
  10. Tests........ 147
    Halogens........ 150
    Hydrogen sulphide........ 151
    Sulphur and sulphates........ 151
    Phosphorus and phosphates........ 152
    Nitrogen and nitrates........ 152
    Ammonia........ 153
    Carbon and carbonates........ 154
    Alkali compounds........ 154
    Alkali earth compounds........ 155
    Antimony and arsenic........ 155
    Metals........ 156
    Organic compounds........ 158
    Sugar........ 158
  11. Clinical tests........ 159
    Urine........ 159
      Acidity of........ 163
      Acetone........ 164
      Albumin........ 164
      Ammonia........ 165
      Blood........ 165
      Bile........ 166
      Chlorides........ 167
      Indican........ 167
      Sulphur........ 168
      Sugar........ 168
      Urea........ 169
      Cammidge reaction........ 170
    Fæces........ 171
    Gastric contents........ 172
    Blood........ 173
    Sputum........ 175
    Stains........ 176
    Culture media........ 177
    Biologic methods........ 177
    Wassermann reaction........ 178

I. General comments—Continued.

Page.
5. Biologic products 180
  1. Enzymes 182
  2. Disinfectants 183
6. Vegetable drugs 185
  1. Powdered drugs 192
  2. Valuation of vegetable drugs 193
  3. Ash determinations 194
  4. Glucosides 196
  5. Alkaloids 196
  6. Assay processes 198
  7. Physiological standardization 202
7. Pharmaceutical preparations 205
  1. General formulas 207
    Forms of medicaments 209
  2. Changes in strength 209
  3. Standardization 210
  4. Requirements 211
  5. Galenicals 212
  6. Decomposition 214
  7. Incompatibility 215
  8. Percolation 216
  9. Extraction 217
  10. Sterilization 218
  11. Forms of administration 220
    Ampoules 220
    Capsules 221
    Compressed Tablets 221
  12. Methods of administration 222

II. International Standards:

1. International conference for the unification of pharmacopœial formulæ for potent medicaments (Brussels Conference) 225
  1. Adoption of Brussels Conference Protocol 225
  2. Tables showing comparative degree of compliance with the international protocol 233
  3. Drops and droppers 237

2. Foreign pharmacopœias:

  1. German 239
  2. Russian 241
  3. Hungarian 242
  4. Italian 244
  5. French 246
  6. Servian 247
  7. Swedish 247
  8. Danish 248
  9. Swiss 248
  10. Austrian 248
  11. Belgian 248
  12. Japanese 249
  13. Dutch 249
  14. Spanish 249
  15. British 250
  16. British Pharmaceutical Codex 251

II. International Standards—Continued.

Page.

3. Comments on U. S. P. VIII relative to the requirements of the Brussels Conference 251

Spanish edition of the U. S. P. VIII 253

Table showing comparative strength of preparations of potent medicaments included in the Brussels Conference Protocol and in the several pharmacopœias used in North and South America 255

III. Comments on official articles 259

PREFACE.

The literature reviewed in the present bulletin, the sixth of this series of "Digests," includes the comments immediately preceding and following the meeting of the Pharmacopœial Convention in Washington, May 10, 1910, and is of peculiar interest to all who are in any way directly concerned in the composition and requirements of the Pharmacopœia of the United States.

So far as pharmacopœial work is concerned the one important feature during the year 1910 was, of course, the decennial meeting of the United States Pharmacopœial Convention referred to above. The proceedings of this Convention are reflected only in outline in the pages of this bulletin, but the references given will suffice to furnish, to such as may be interested, not only a complete account of the achievements of the Convention but will also serve to locate much if not all of the comment subsequently made, on the work that was done.

The publication of the German Pharmacopœia has elicited considerable criticism and comment, directly applicable in the revision of our own Pharmacopœia of the United States, and much of this comment appearing during the year 1910 is reflected in the following pages and should prove to be of value to the revisers of the Pharmacopœia. The preliminary publication of standards and requirements to be included in the next British Pharmacopœia has also produced considerable comment of value in the revision of the American Pharmacopœia and is reflected at some length in the following pages.

The National Formulary being in active course of revision has been freely discussed by contributors to pharmaceutical literature during the year and this discussion, with comments on corresponding preparations to be included in the new edition of the British Pharmaceutical Codex will no doubt prove to be of value to the members of the National Formulary Committee and to others who may be interested in the development of the National Formulary as a standard under the provisions of the Food and Drugs Act of June 30, 1906.

The desirability of further developing international standards for widely used medicaments was further emphasized during the year, in connection with the proceedings of several national and international organizations, more particularly the International

Congress of Pharmacy, held in Brussels, in September, 1910, at which some 16 of the more important nations of the world, including the United States of America, were officially represented.

The communications read and discussed at this Congress will no doubt lead to further unification in standards and methods of analysis, and the official representatives present expressed their willingness to cooperate in the development of international uniformity, by exerting their individual influence to induce the adoption of evidently desirable innovations in the pharmacopœias of their respective countries.

The need for cooperation on the part of the Government in our own country is further emphasized by the undertaking of the Diplomatic Representative of the United States, in signing the International Treaty of 1906, regarding the formulas for potent medicaments, that the Government of the United States should at the next revision of the American Pharmacopœia exercize its influence to bring the latter into harmony with the agreement reached by the Brussels Conference.

At the United States Pharmacopœial Convention the importance of international uniformity in the strength of potent medicaments was generally recognized, and the failure of the U. S. P. VIII to comply with the requirements of the Brussels' Protocol requirements was referred to by a number of the representatives present. Among others, H. C. Wood, in his presidential address, points out that the Committee of Revision of the previous U. S. Pharmacopœial Convention has in great measure conformed to the recommendations of the meeting at Brussels. The failure to do so completely seems to him the one blot on their work.

A comparative analysis, of the compliance shown by the several pharmacopœias published since 1902, shows that the U. S. P. VIII is far behind all others in the degree of compliance evidenced; but it is generally expected that the U. S. P. IX will comply much more fully, in view of the recommendation made in paragraph 6 of the general principles adopted by the Convention of 1910.

It is being more and more appreciated that the Pharmacopœia is fundamentally designed to be an important factor in the conservation of the public health, and a number of writers during the calendar year covered by this review have voiced their convictions in this regard, and have suggested ways and means of enlarging on the field of usefulness of the Pharmacopœia as a public health measure.

There is, it is true, considerable variety of opinion in regard to the best method of developing this particular feature of pharmacopœial work, but there appear to be few, if any, writers on pharmacopœial subjects who are unwilling to admit that the fundamental object of the Pharmacopœia is the conservation of the public health, rather than the exploitation of the sale of medicines.

The public health feature of pharmacopœial work is further emphasized by the attention that is being devoted, in pharmacopœias generally, to materials used in clinical laboratories for the scientific study of disease, and to the development and standardization of disinfectants and other prophylactic measures for the prevention of disease. These features bid fair to play a very important part in the pharmacopœias of the future and an effort has been made to reflect their evolution in the pages of this bulletin. For this and other reasons, the comments on the reagents and stains used in clinical laboratory work are somewhat more comprehensive than the corresponding comments included in the bulletin for 1909, and should, therefore, be of value to officers of the Public Health and Marine-Hospital Service in charge of hospital work, as well as to all who are actively engaged in clinical laboratory investigations.

This bulletin, like the one immediately preceding, has been compiled largely from material directly accessible to the compilers, and evidences the advantages that would accrue to all who are interested in pharmacopedics if all of the necessary literature were accessible.

Many of the longer articles are frequently reprinted in several journals and an effort has been made to give, in connection with some of the more important contributions, references to two or more journals in which the article or statement may be found.

To facilitate reference the material in these bulletins is generally arranged in accordance with the style of the official monographs. In connection with articles for which a large and varied number of comments are available, they are arranged, so far as practicable, in the following order: title, origin, composition, requirements, tests and assays, adulterations, preparations and uses.

As indicated by the note under the general heading "Syrupi," the compilers are not responsible for the frequent use of the term "sirup" in place of the English, pharmacopœial, title "syrup."

The thanks of the compilers are due and are hereby extended to the publishers and editors of pharmaceutical journals supplying their periodicals in exchange, to the Secretaries of State and National Pharmaceutical organizations for copies of the several annual proceedings, to John Uri Lloyd, Cincinnati, for the use of several Eclectic Journals, to Caswell A. Mayo, New York, for the use of a copy of the second edition of the Greek Pharmacopœia and to the Librarians of the Library of Congress, the Library of the Department of Agriculture, the Library of the Office of the Surgeon-General, Washington, the Library of the Philadelphia College of Pharmacy, and the Library of the College of Physicians, Philadelphia, for the use of periodicals not directly accessible to the compilers.

M. G. M.
M. I. W.

DIVISION OF PHARMACOLOGY,
HYGIENIC LABORATORY,
March 25, 1912.

LIST OF THE LITERATURE REVIEWED.

1. TITLE ABBREVIATIONS—JOURNALS.

Abstr. Proc. U. S. P. C. 1910—Abstract of Proceedings, United States Pharmacopœial Convention, 1910.

Am. Chem. J.—American Chemical Journal, Baltimore, 1910, v. 43, 44.

Am. Druggist—American Druggist and Pharmaceutical Record, New York, 1910, v. 56, 57.

Am. J. M. Sc.—American Journal of the Medical Sciences, Philadelphia, 1910, v. 139, 140.

Am. J. Pharm.—American Journal of Pharmacy, Philadelphia, 1910, v. 82.

Am. J. Physiol.—American Journal of Physiology, Boston, 1910, v. 26, 27.

Am. J. Sc.—American Journal of Science, New Haven, 1910, v. 29, 30 (179, 180).

Am. Perf.—The American Perfumer and Essential Oil Review, New York, 1910–11, v. 5.

Am. Vet. Rev.—American Veterinary Review, New York, 1909–10, v. 37, 1910, v. 38.

Analyst (The), London, 1910, v. 35.

Analyt. Notes—Evans Sons Lescher & Webb, Analytical Notes, 1910, Liverpool, 1911.

Ann. Chem.—Justus Liebig's Annalen der Chemie, Leipzig, 1910, v. 372–377.

Ann. chim. analyt.—Annales de chimie analytique, Paris, 1910, v. 15.

Ann. falsif.—Annales des falsifications, Paris, 1910, v. 3, 4.

Ann. pharm. Louvain—Annales de Pharmacie, Louvain, 1910, v. 16.

Ann. Bot.—Annals of Botany, London 1910, v. 24.

Ann. Rep. Food & Drug Com. Missouri—Annual Report, Food and Drug Commissioner, Missouri, 1910.

Ann. Rep. U. S. Dept. Agric.—Annual Report, U. S. Department of Agriculture, 1910.

Apothecary (The), Boston, 1910, v. 22.

Apoth. Ztg.—Apotheker Zeitung, Berlin, 1910, v. 25.

Arb. k. Gsndhtsamte.—Arbeiten aus dem kaiserlichen Gesundheitsamte, Berlin, 1910, v. 34–36.

Arb. pharm. Inst. Univ. Berl.—Arbeiten aus dem pharmaceutischen Institut der Universität Berlin, for 1910, 1911, v. 8.

Arch. Pharm.—Archiv der Pharmazie, Berlin, 1910, v. 248.

Arch. exper. Path. u. Pharmakol.—Archiv für experimentelle Pathologie und Pharmakologie, Leipzig, 1910, v. 62, 63.

Arch. Int. Med.—Archives (The) of Internal Medicine, Chicago, 1910, v. 5, 6.

Arch. internat. pharmacod. et thérap.—Archives internationales de pharmacodynamie et de thérapie, Brussels and Paris, 1910, v. 20.

Arch. farmacol. sper.—Archivio di Farmacologia sperimentale e Scienze affini, Siena, 1910, v. 9, 10.

Ber. deutsch. chem. Gesellsch.—Berichte der deutschen chemischen Gesellschaft, Berlin, 1910, v. 43.

Ber. pharm. Gesellsch.—Berichte der deutschen pharmazeutischen Gesellschaft, Berlin, 1910, v. 20.

Bericht von Heinrich Haensel, Pirna, 1910, March-October.

Biochem. J. Liverpool—Biochemical Journal, Liverpool, 1910, v. 5.

Biochem. Centralbl.—Biochemisches Centralblatt, Leipzig, 1909–1910, v. 9.

Biochem. Ztschr.—Biochemisches Zeitschrift, Berlin, 1910, v. 20–29.
Boll. chim. farm.—Bolletino Chimico Farmaceutico, Milan, 1910, v. 49.
Boston M. & S. J.—Boston Medical and Surgical Journal, 1910, v. 162, 163.
Bot. Gaz.—Botanical Gazette, Chicago, 1910, v. 49, 50.
Bot. Jahrb. Engler—Botanische Jahrbücher, Engler, Leipzig, 1910, v. 44.
Bot. Centralbl.—Botanisches Centralblatt, Jena, 1910, v. 113, 114.
Brit. & Col. Drug.—British and Colonial Druggist, London, 1910, v. 57, 58.
Brit. Food J.—British Food Journal, London, 1910, v. 12.
Brit. M. J.—British Medical Journal, London, 1910, v. 1, 2.
Bull. Agric. Exper. Sta. North Dakota—Special Bulletin, Agricultural Experiment Station, North Dakota, 1910, v. 1.
Bull. Am. Pharm. Ass.—Bulletin of the American Pharmaceutical Association, 1910, v. 5.
Bull. Bur. Chem. U. S. Dept. Agric.—Bulletins, Bureau of Chemistry, U. S. Department of Agriculture, 1910, No. 130, 131.
Bull. Bur. Plant Ind. U. S. Dept. Agric.—Bulletins, Bureau of Plant Industry, U. S. Department of Agriculture, 1910, No. 163–197.
Bull. California Bd. Health—Monthly Bulletin, California State Board of Health, 1910, v. 5, No. 8–12, v. 6, No. 1, 2.
Bull. Colorado Bd. Health—Bulletin of the Colorado State Board of Health, 1910, v. 10, No. 1, 2.
Bull. Dept. Food & Drug Inspec. Missouri—Bulletin of the Department of Food and Drug Inspection, Missouri, 1910, v. 2, No. 10, 11.
Bull. Dept. Agric. Jamaica—Bulletin of the Department of Agriculture, Jamaica, 1910, new series v. 1, No. 3.
Bull. Florida Agric. Dept.—Quarterly Bulletin of the Agricultural Department, Florida, 1910, v. 20, No. 1.
Bull. Georgia Dept. Agric.—Bulletin, Georgia Department of Agriculture, 1910, No. 51 (June 1, 1908 to June 1, 1910).
Bull. Kentucky Agric. Exper. Sta.—Bulletin, Kentucky Agricultural Experiment Station, 1910, No. 150.
Bull. Tennessee Food & Drugs Insp.—Bulletin, Tennessee Food and Drugs Inspection, 1910.
Bull. Hyg. Lab. U. S. P. & M.-H. S.—Bulletins, Hygienic Laboratory, U. S. Public Health and Marine-Hospital Service, 1910.
Bull. Imp. Inst.—Bulletin of the Imperial Institute, London, 1910, v. 8.
Bull. Kansas Bd. Health.—Bulletin, Kansas State Board of Health, 1910, v. 6.
Bull. Pharm.—Bulletin of Pharmacy, Detroit, 1910, v. 24.
Bull. pharm. sud-est—Bulletin de Pharmacie du Sud-Est, Montpellier, 1910, v. 15.
Bull. sc. pharmacol.—Bulletin des Sciences Pharmacologiques, Paris, 1910, v. 17.
Bull. Soc. Chim. Belg.—Bulletin de la Société Chimique de Belgique, Gand, 1910, v. 24.
Bull. Soc. chim. France—Bulletin de la Société de Chimie de France, Paris, 1910, 4th Ser. v. 7.
Bull. Soc. roy. pharm. Brux.—Bulletin de la Société Royale de Pharmacie de Bruxelles, 1910, v. 54.
Bull. Soc. scient. et méd. l'ouest—Bulletin de la Société scientifique et médicale de l'ouest, Rennes, 1910, v. 19.
Bull. Soc. pharm. Bordeaux—Bulletin de la Société de Pharmacie de Bordeaux, 1910, v. 50.
Bull. Torrey Bot. Club—Bulletin of the Torrey Botanical Club, New York, 1910, v. 37.
Chem. Abstr.—Chemical Abstracts, Easton, 1910, v. 4.
Chem. Eng.—Chemical Engineer, Chicago, 1910, v. 11, 12.
Chem. News—Chemical News, London, 1910, v. 101, 102.

Chem. Trade J.—Chemical Trade Journal, London, 1910, v. 46, 47.

Chem. Ztg. Cöthen—Chemiker Zeitung, Cöthen, 1910, v. 34.

Chem. Repert. Cöthen—Chemisch-Technisches Repertorium, Cöthen, 1910, v. 34.

Chem. Weekblad—Chemisch Weekblad, Amsterdam, 1910, v. 7.

Chem. Ind.—Chemische Industrie, Berlin, 1910, v. 33.

Chem. Zentralbl.—Chemisches Zentralblatt, Berlin, 1910, v. 81.

Chem. & Drug.—Chemist and Druggist, London, 1910, v. 76, 77.

Chem. & Drug. Australas.—Chemist and Druggist of Australia, Sydney and Melbourne, 1910, v. 25.

Circ. & Agric. J. Roy. Bot. Gard. Ceylon—Circular and Agricultural Journal of the Royal Botanical Gardens, Ceylon, 1910, 4, No. 23, 25; v. 5, No. 1–10, 13, 14.

Circ. Bur. Chem. U. S. Dept. Agric.—Circulars, Bureau of Chemistry, U. S. Department of Agriculture, 1910, No. 49–65.

Compt. rend. Acad. sc.—Comptes rendus hebdomadaires des séances de l'Academie des sciences, Paris, 1910, v. 150, 151.

Compt. rend. Congr. Internat. Pharm.—Compte rendu du Xme Congrès International de Pharmacie, 1910 (Brussels, 1911).

Compt. rend. Soc. biol.—Comptes rendus des séances et mémoires de la Société de biologie, Paris, 1910, v. 68, 69.

Cons. & Tr. Rep.—Daily Consular and Trade Reports, Bureau of Manufactures, U. S. Department of Commerce and Labor, 1910 ("Weekly" March 5 to June 30).

Critic and Guide, New York, 1910, v. 13.

Crón. méd. mex.—Crönica médica mexicana, Mexico, 1910, v. 13.

Dental Cosmos, Philadelphia, 1910, v. 52.

Dental Digest (The), Chicago, 1910, v. 16.

D.-A. Apoth. Ztg.—Deutsch-Amerikanische Apotheker Zeitung, New York, 1910–11, v. 31.

Drug Topics, New York, 1910, v. 25.

Drug. Circ.—Druggists Circular, New York, 1910, v. 54.

Eclectic M. J.—Eclectic Medical Journal, Cincinnati, 1910, v. 70.

Ergeb. Physiol.—Ergebnisse der Physiologie, Wiesbaden, 1910, v. 9.

Exper. Sta. Rec.—Experiment Station Record, U. S. Department of Agriculture, 1910, v. 22, 23.

F. I. D.—Food Inspection Decisions, U. S. Department of Agriculture, 1910, No. 111–129.

Fortschr. Chem.—Fortschritte der Chemie, Physik und Physikalischen Chemie, Leipzig, 1910, v. 2, No. 1–7.

Handels-Bericht, Gehe & Co., Dresden, 1910.

Hahnemann. Month.—Hahnemannian Monthly, Philadelphia, 1910, v. 45.

Hyg. Rundschau.—Hygienische Rundschau, Berlin, 1910, v. 20.

Index Medicus, Washington, 1910, v. 8.

Jahres-Ber. Caesar & Loretz—Jahres-Bericht von Caesar & Loretz, Halle a. S. 1910.

J. Adv. Therap.—Journal (The) of Advanced Therapeutics, New York, 1910, v. 28.

J. Agric. trop.—Journal d'Agriculture tropicale, Paris, 1910, v. 10.

J. Am. Chem. Soc.—Journal of the American Chemical Society, Boston, 1910, v. 32.

J. Am. Inst. Homœop.—Journal of the American Institute of Homœopathy, New York, 1910, v. 2.

J. Am. M. Ass.—Journal of the American Medical Association, Chicago, 1910, v. 54, 55.

J. Biol. Chem.—Journal of Biological Chemistry, New York, 1910, v. 7, 8.

J. Chem. Soc. Lond.—Journal of the Chemical Society, London, 1910, v. 97, 98.

J. Exper. M.—Journal of Experimental Medicine, New York, 1910, v. 12.

J. Frankl. Inst.—Journal (The) of the Franklin Institute, Philadelphia, 1910, v. 169–170.

J. Ind. & Eng. Chem.—Journal (The) of Industrial and Engineering Chemistry, Easton, 1910, v. 2.
J. Med. Research—Journal of Medical Research, Boston, 1910, v. 22, 23.
J. Pharm. Soc. Japan—Yakugakuzasshi (Journal of the pharmaceutical society of Japan), 1910.
J. pharm. Anvers—Journal de pharmacie d'Anvers, 1910, v. 66.
J. Pharm. Elsass-Lothringen—Journal der Pharmacie von Elsass-Lothringen, 1910, v. 36.
J. pharm. et chim.—Journal de pharmacie et de chimie, Paris, 1910, 7 ser. v. 1, 2.
J. Pharmacol. & Exper Therap.—Journal of Pharmacology and Experimental Therapeutics, Baltimore, 1910–11, v. 2.
J. physiol. et path. gén.—Journal de physiologie et de pathologie géneral, Paris, 1910, v. 12.
J. prakt. Chem.—Journal für praktische Chemie, Leipzig, 1910, v. 81, 82.
J. Physiol. Lond.—Journal of Physiology, London, 1910, v. 40, 41.
J. Soc. Chem. Ind.—Journal of the Society of Chemical Industry, London, 1910, v. 29.
Just's bot. Jahresb.—Just's botanischer Jahresbericht, Leipzig and Berlin, 1910, v. 38, Pt. I, No. 1.
Lancet, (The), London, 1910, v. 178, 179.
Med. Rec.—Medical Record, New York, 1910, v. 77, 78.
Merck's Ann. Rep.—Merck's Annual Report, 1910, Darmstadt, 1911, v. 24.
Merck's Arch.—Merck's Archives, New York, 1910, v. 12.
Merck's Rep.—Merck's Report, New York, 1910, v. 19.
Meyer Bro. Drug.—Meyer Brothers Druggist, St. Louis, 1910, v. 31.
Midl. Drug.—Midland Druggist and Pharmaceutical Review, Columbus, 1910, v. 44.
Monatsh. Chem.—Monatshefte für Chemie, Vienna, 1910, v. 31.
N. A. R. D. Notes—The Journal of the National Association of Retail Druggists, Chicago, 1910, v. 9, 10, 11.
Nat. Druggist—National (The) Druggist, St. Louis, 1910, v. 40.
Nat. Eclect. M. Ass. Quart.—The National Eclectic Medical Association Quarterly, Cincinnati, 1910, v. 1.
New Hampshire San. Bull.—New Hampshire Sanitary Bulletin, 1910, v. 3, No. 9–11.
New Idea (The), Detroit, 1910, v. 32.
N. York M. J.—New York Medical Journal, 1910, v. 91, 92.
Northwestern Druggist (The), Minneapolis, 1910, v. 11.
Notices of Judgment, U. S. Department of Agriculture, 1910, No. 123–709.
Nouv. remèdes—Nouveaux remèdes, Paris, 1910, v. 26.
Oesterr. Chem.-Ztg.—Oesterreichische Chemiker-Zeitung, Vienna, 1910, v. 13.
Oil, Paint and Drug Reporter, New York, 1910, v. 77, 78.
Omaha Druggist (The), Omaha, 1910, v. 23 (Jan.-July).
Pacific Drug Rev.—Pacific (The) Pacific Drug Review, Portland, 1910, v. 22.
Pacific Pharm.—Pacific (The) Pharmacist, San Francisco, 1910, v. 4.
Pflanzer (Der), Tanga, 1910, v. 6.
Pharm.-Ber. D. A. B. 5 [1910]—Pharmakopoe-Bericht. Die vegetabilischen Drogen des Deutschen Arzneibuches 5. Ausgabe, Caesar & Loretz, Halle, 1911.
Pharm. Era—Pharmaceutical (The) Era, New York, 1910, v. 43.
Pharm. J.—Pharmaceutical (The) Journal, London, 1910, v. 30 (84), 31 (85).
Pharm. Weekblad—Pharmaceutisch Weekblad, Amsterdam, 1910, v. 47.
Pharm. Post—Pharmazeutische Post, Vienna, 1910, v. 43.
Pharm. Ztg.—Pharmazeutische Zeitung, Berlin, 1910, v. 55.
Pharm. Zentralh.—Pharmazeutische Zentralhalle für Deutschland, Dresden, 1910, v. 51.
P. C. P. Alumni Report—Philadelphia College of Pharmacy, Alumni Report, Philadelphia, 1910, v. 47.

Philippine J. Sc.—Philippine (The) Journal of Science, Manila, 1910, v. 5, A. B. C.

Pract. Drug.—Practical (The) Druggist and Pharmaceutical Review of Reviews, New York, 1910, v. 27, 28.

Proc. Am. Pharm. Ass.—Proceedings of the American Pharmaceutical Association, Baltimore, 1910, v. 58.

Proc. Am. Philosoph. Soc.—Proceedings of the American Philosophical Society, Philadelphia, 1910, v. 49.

Proc. Ass. Off. Agric. Chem.—Proceedings of the Association of Official Agricultural Chemists, Washington, 1910, 27th Annual Convention (Bulletin No. 137, Bureau of Chemistry, U. S. Department of Agriculture, 1911).

Proc. N. W. D. A.—Proceedings of the National Wholesale Druggists Association, New York, 1910, v. 36.

Proc. Roy. Soc. Lond.—Proceedings of the Royal Society, London, 1910, v. 84.

Proceedings of State Pharmaceutical Associations:

Proc. Alabama Pharm. Ass. 1910.
Proc. Arkansas Pharm. Ass. 1910.
Proc. Connecticut Pharm. Ass. 1910.
Proc. Florida Pharm. Ass. 1910.
Proc. Georgia Pharm. Ass. 1910.
Proc. Illinois Pharm. Ass. 1910.
Proc. Indiana Pharm. Ass. 1910.
Proc. Iowa Pharm. Ass. 1910.
Proc. Kansas Pharm. Ass. 1910.
Proc. Kentucky Pharm. Ass. 1910.
Proc. Maine Pharm. Ass. 1910.
Proc. Maryland Pharm. Ass. 1910.
Proc. Massachusetts Pharm. Ass. 1910.
Proc. Michigan Pharm. Ass. 1910.
Proc. Minnesota Pharm. Ass. 1910.
Proc. Mississippi Pharm. Ass. 1910.
Proc. Missouri Pharm. Ass. 1910.
Proc. Nebraska Pharm. Ass. 1910.
Proc. New Hampshire Pharm. Ass. 1910.
Proc. New Jersey Pharm. Ass. 1910.
Proc. New York Pharm. Ass. 1910.
Proc. North Carolina Pharm. Ass. 1910.
Proc. North Dakota Pharm. Ass. 1910.
Proc. Ohio Pharm. Ass. 1910.
Proc. Pennsylvania Pharm. Ass. 1910.
Proc. Tennessee Pharm. Ass. 1910.
Proc. Texas Pharm Ass. 1910.
Proc. Vermont Pharm. Ass. 1910.
Proc. Virginia Pharm. Ass. 1910.
Proc. West Virginia Pharm. Ass. 1910.
Proc. Wisconsin Pharm. Ass. 1910.

Répert. pharm.—Répertoire de Pharmacie, Paris, 1910, v. 22.

Rep. Chem. Lab. Am. M. Ass.—Reports of the Chemical Laboratory of the American Medical Association, Chicago, 1910, v. 3.

Rep. Council Pharm. & Chem.—Reports of the Council of Pharmacy and Chemistry, American Medical Association, Chicago, 1910.

Rep. Dairy & Food Com. Connecticut—Reports of the Dairy and Food Commissioner, Connecticut, 1910, Hartford, 1911.

Rep. Dairy, Food & Oil Com. Wyoming—Report, The State Dairy, Food and Oil Commissioner, Wyoming, 1910.

Rep. District of Columbia Health Off.—Report of the Health Officer of the District of Columbia, 1910, Washington, 1911.

Rep. Local Govt. Bd. Lond.—Report of the Local Government Board, Supplement, Report of the Medical Officer, London, 1910, 39th.

Rep. Massachusetts Bd. Health—Report of the Massachusetts State Board of Health, Boston, 1910.

Rep. New Hampshire Bd. Health—Report of the State Board of Health of the State of New Hampshire, 1910, v. 21.

Retail Druggist (The), Detroit, 1910, v. 17.

Rev. Am. Farm. y Med.—Revista Americana de Farmacia y Medicina, New York, 1910, v. 14.

Riedel's Berichte, Berlin, 1910.

Riedel's Mentor, Berlin, 1910.

Rocky Mountain Druggist (The), Denver, 1910, v. 24.

Schweiz. Wchnschr. Chem. u. Pharm.—Schweizerische Wochenschrift für Chemie und Pharmacie, Zürich, 1910, v. 48.

Sc. Am. Suppl.—Scientific American Supplement, New York, 1910, v. 69, 70.

Sc. & Ind. Bull.—Scientific and Industrial Bulletin of Roure-Bertrand Fils of Grasse, 1910.

Semi-Ann. Rep.—Semi-Annual Report, Schimmel & Co. Miltitz, 1910.

Southall Bros. & Barclay—Nineteenth Laboratory Report, 1910, Birmingham, 1911.

Southern Pharmacist (The), Dallas, 1909–1910, v. 2.

Spatula (The), Boston, 1910, v. 17.

Svensk farm. Tidskr.—Svensk farmaceutisk Tidskrift, Stockholm, 1910, v. 14.

Therap. Gaz.—Therapeutic Gazette, Detroit, 1910, v. 34.

Therap. Monatsh.—Therapeutische Monatshefte, Berlin, 1910, v. 24.

Therap. Gegenw.—Therapie der Gegenwart, Berlin, 1910, v. 51 (New Ser. v. 12).

Therapist (The), London, 1910, v. 20.

Tr. Am. Inst. Chem. Eng.—Transactions of the American Institute of Chemical Engineers, New York, 1910, v. 3, 1911.

Tr. Am. M. Ass. Sec. Pharm. & Therap.—Transactions of the Section on Pharmacology and Therapeutics of the American Medical Association, Chicago, 1910.

Tropenpflanzer (Der), Berlin, 1910, v. 14.

Vet. J.—Veterinary Journal, London, 1910, v. 66 (New Ser. v. 17).

Western Druggist (The), Chicago, 1910, v. 32.

Year-Book of Pharmacy and Transactions of the British Pharmaceutical Conference, London, 1910.

Ztschr. allg. österr. Apoth.-Ver.—Zeitschrft des allgemeinen österreichischen Apotheker-Vereines, Vienna, 1910, v. 48.

Ztschr. anal. Chem.—Zeitschrift für analytische Chemie, Wiesbaden, 1910, v. 49.

Ztschr. ang. Chem.—Zeitschrift für angewandte Chemie, Berlin, 1910, v. 23.

Ztschr. anorg. Chem.—Zeitschrift für anorganische Chemie, Hamburg, 1910, v. 66–69.

Ztschr. exper. Path. u. Therap.—Zeitschrift für experimentelle Pathologie und Therapie, Berlin, 1910, v. 9.

Ztschr. öffentl. Chem.—Zeitschrift für öffentliche Chemie, Plauen i. V., 1910, v. 16.

Ztschr. physik. Chem.—Zeitschrift für physikalische Chemie, Leipzig, 1910, v. 69, 70.

Ztschr. physiol. Chem.—Zeitschrift für physiologische Chemie, Hoppe-Seyler, Strassburg, 1910, v. 65–68.

Ztschr. Unters. Nahr. u. Genussm.—Zeitschrift für Untersuchung der Nahrungs und Genussmittel, Berlin, 1910, v. 19, 20.

Zentralbl. Biochem. u. Biophysik—Zentralblatt für Biochemie und Biophysik, Leipzig, 1910, v. 10.

Zentralbl. Physiol.—Zentralblatt für Physiologie, Leipzig and Vienna, 1910, v. 24.

Zentrlbl. Physiol. u. Path. Stffwchsls.—Zentralblatt für die gesamte Physiologie und Pathologie des Stoffwechsels, Berlin and Vienna, 1910, v. 5.

2. TITLE ABBREVIATIONS—PHARMACOPŒIAS AND NONOFFICIAL STANDARDS.

Ph. Arg. I.—Farmacopea Nacional Argentina, primera edición, 1898.
Ph. Austr. VIII.—Pharmacopœa Austriaca, editio octava, 1906.
Ph. Belg. III.—Pharmacopœa Belgica, editio tertia, 1906.
Ph. Brit. IV.—British Pharmacopœia, 1898.
Ph. Chil. I.—Farmacopea Chilena, 1886.
Ph. Dan. VII.—Pharmacopœa Danica, 1907.
Ph. Fr. V.—Codex Medicamentarius Gallicus, Pharmacopée Française, 1908.
Ph. Germ. V.—Deutsches Arzneibuch, 5. Ausgabe, 1910.
Ph. Helv. IV.—Pharmacopœa Helvetica, editio quarta, 1907.
Ph. Hisp. VII.—Farmacopea Oficial Española, séptima edición, 1905.
Ph. Hung. III.—Pharmacopœa Hungarica, editio tertia, 1909.
Ph. Ital. III.—Farmacopea ufficiale del regno d'Italia, terza edizione, 1909.
Ph. Japon. III.—The Pharmacopœia of Japan, 1906 (English Translation, 1907).
Ph. Mex. IV.—Nueva Farmacopea Mexicana, cuarta edición, 1904.
Ph. Ndl. IV.—Pharmacopœa Nederlandica, editio quarta, 1905.
Ph. Russ. VI.—Pharmacopœa Rossica, sixth edition, 1910.
Ph. Serb. II.—Pharmacopœa Serbica, editio secunda, 1908.
Ph. Svec. IX.—Svenska Farmakopén (Pharmacopœa Svecica, ed. IX), 1908.
U. S. P. VIII.—Pharmacopœia of the United States, 8th Dec. Rev., 1905.
Ph. Ven. I.—Farmacopea Venezolana, 1898.
N. F. III.—The National Formulary of Unofficial Preparations, Baltimore, 1906.
N. N. R.—New and Nonofficial Remedies, Chicago, 1910.
B. P. C.—British Pharmaceutical Codex, London, 1911.

DIGEST OF COMMENTS ON THE PHARMACOPŒIA OF THE UNITED STATES OF AMERICA, VIII, AND ON THE NATIONAL FORMULARY, III.[1]

I. GENERAL COMMENTS.

1. LEGAL STATUS AND DEVELOPMENT.

1. PURE FOOD AND DRUGS LAW.

Douglass, George L., asserts that the food and drugs act "is a righteous law entitled to the support of every honest American."—Proc. N. W. D. A. 1910, p. 342.

The Board of Control expresses the belief that the pure food and drugs law has leveled the pinnacle of righteousness and made it into a platform upon which a large proportion of honest dealers have found room.—*Ibid.* p. 374. See also Beilstein, Christian.—p. 97.

Kebler, L. F., states that the food and drugs act is a criminal statute and the courts construe such laws literally. He points out that full compliance with the rigid standard is manifestly impossible and suggests that the Pharmacopœia permit a reasonable deviation from the standard prescribed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 593.

Dohme, A. R. L., states that we all appreciate that the pure food law is most excellent and one of the greatest reforms of the last decade, and it is not only highly appreciated, but was as sorely needed. Let us not try to kill the measure by cutting down its diet to sawdust and water.—Proc. Maryland Pharm. Ass. 1910, p. 43.

Vanderkleed, Chas. E., states that the food and drugs act is no longer in an experimental stage: its beneficient effect on the drug market no one will deny.—Proc. Pennsylvania Pharm. Ass. 1910, p. 131.

Remington, Joseph P., thinks the food and drugs act of June 30, 1906, has worked a marvelous change for the better by improving the quality of medicine in compelling adherence to the standards of the United States Pharmacopœia.—Am. Druggist, 1910, v. 56, p. 53. Also Proc. Texas Pharm. Ass. 1910, p. 122.

Stewart, F. E., thinks that the pure food and drugs act protects materia medica standards not only directly, but indirectly, by forcing manufacturers to label their products truthfully.—Am. J. Pharm. 1910, v. 82, p. 533.

---

[1] Manuscript submitted for publication March 26, 1912.

Schneider, Albert, in discussing the adulteration of vegetable drugs, expresses the belief that the supposition frequently expressed that the existence of food and drugs laws would act as a check upon the work of those criminally defective who deliberately adulterate articles intended for the relief of human suffering, is not founded on fact.—Pacific Pharmacist, 1909–10, v. 4, pp. 13–14.

Plaut, Albert, states that owing to the lack of uniformity, the aim and purpose of the food and drugs act has been to a great extent nullified. There must be a purpose in entering asafetida, bought in Hamburg and sold to a house in Philadelphia, at the port of Cleveland. He thinks it should be just as difficult to bring in drugs not up to standard at our smaller ports of entry as at New York.—Proc. N. W. D. A. 1910, p. 375.

Caverly, C. S., expresses the belief that the real objects of the food and drug laws are the protection of the public health and the public pocket book. They seek to exclude things positively dangerous to health and to discourage fraud.—Proc. Vermont Pharm. Ass. 1910, p. 11.

Wiley, H. W., discusses drug legislation as an educator, and points out that the instruction has taken two principal forms: first, a more rigid chemical control of raw materials, as well as of the finished product, and second, a great extension of the use of the microscope as a means of detecting adulteration and debasement.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 406–408.

Watson, George Y., thinks that the pure food and drugs laws—both National and State, are among the most important pieces of legislation ever enacted. Druggists should not hesitate to lend their endorsement to such measures as mean honesty, sincerity and truthfulness.—Proc. North Carolina Pharm. Ass. 1910, p. 25.

Porter, C. S., suggests that each druggist make application for all publications sent out by the Department of the State and for all decisions by the National Board of Food and Drug Inspection at Washington, D. C., as well as decrees and opinions from the courts, relating to drugs.—Proc. Kentucky Pharm. Ass. 1910, p. 46.

Sy, A. P., discusses the effect of the food and drugs act on drugs and patent medicines.—Am. Druggist, 1910, v. 57, pp. 5–6. Also Proc. New York Pharm. Ass. 1910, pp. 209–214.

Hallberg, C. S. N., discusses the principles involved in the Federal food and drugs act and the relation thereto in State legislation. He concludes that all State drug acts should carefully avoid falling into the error of exemption of the Federal act, but they should declare that all drugs sold for medicinal uses under the names recognized in the national standards must show reasonable uniformity thereto.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 623–626.

Parry, Ernest J., presents a study of the comparative jurisprudence of the United States and Great Britain in connection with the pure food and drugs law.—Am. Perf. 1910–11, v. 5, pp. 265–266.

The laws and the interpretation of laws regulating the sale of medicaments in various parts of Germany are referred to.—Pharm. Ztg. 1910, v. 55, pp. 12–14.

The Standards and Regulations for foods and drugs adopted by the Departmental Conference of five Australian states (New South Wales, Queensland, South Australia, Tasmania and Victoria) are reprinted.—Chem. & Drug. 1910, v. 77, pp. 236–238.

Hudson, T. G., thinks that the enactment of laws by the several States and the National Government shows that the people are interested in the quality and preparation of drugs.—Bull. Georgia Dept. Agric. 1910, No. 51, p. 129.

West, Charles A., presents a résumé of the legislation in the several States during the past year.—Proc. N. W. D. A. 1910, pp. 332–339.

The committee on drug reform of the American Pharmaceutical Association calls attention to the variance of requirements existing in the food and drugs acts of the several States.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 729.

Caspari, Charles, Jr., discusses the food and drugs law in the State of Maryland.—Proc. Maryland Pharm. Ass. 1910, pp. 136–140.

Ashbrook, C. S., asserts that it is with serious concern that the druggists of Ohio have been forced to admit that the law relating to standardized preparations and the purity of drugs has been a failure in the very important particular of absolutely failing to protect the citizens of this Commonwealth from the wide distribution through many channels other than pharmacies, of immense quantities of medicines of unknown quality, and which the State authorities have no legal right to investigate.—Proc. Ohio Pharm. Ass. 1910, p. 27.

An editorial (Pacific Pharmacist, 1909–10, v. 4, p. 475), in discussing drug adulteration on the Pacific coast, reports that while crude and powdered vegetable drugs are found in the market of California to be adulterated from 30 to 52 per cent, the same class of drugs in the States of the East and Middle West are adulterated only to the extent of from 10 to 20 per cent.

Hubbard, F. A., presents a list of the articles enumerated in the Massachusetts law as domestic remedies that may be sold by grocers and others. He also enumerates the articles that may be sold by grocers if put up by registered pharmacists, manufacturers or wholesale dealers.—Proc. Massachusetts Pharm. Ass. 1910, pp. 108–109.

Hallberg, C. S. N., objects to the introduction in State food and drug laws of the proviso permitting of deviations from pharmacopœial strength.—Proc. Nebraska Pharm. Ass. 1910, p. 27.

An editorial (Am. Druggist, 1910, v. 56, p. 159) calls attention to some of the proposed amendments to the food and drugs act.

Davis, James E., makes a number of suggestions as to needed changes in the Federal food and drugs act.—Proc. Michigan Pharm. Ass. 1910, p. 67.

Beilstein, Christian, calls attention to some of the abuses under the guaranty clause of the food and drugs law that have become evident during the past year.—Proc. N. W. D. A. 1910, p. 97.

Beal, James H., in discussing the adulteration of drugs, expresses the belief that these things go to show that it is up to the retail druggist to examine his supplies himself because the responsibility is on him.—Proc. Missouri Pharm. Ass. 1910, p. 18.

Dunning, H. A. B., thinks that the requirements of the food and drugs laws will result in forcing the pharmacist to purchase most drugs and preparations of assayable drugs, as tinctures of aconite, belladonna, opium, etc.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 968.

Martin, J. H., thinks that three-fourths, and one might say four-fifths, of the trouble under the drugs law is going to be for the lack of care in preparing galenicals. He thinks that retail druggists should exercise as much care in preparing their galenicals as is exercised in their prescription department, and asserts that the use of the old flare-top graduate to measure out a pint of whatever it might be will have to be relegated to the rear, because the chance of error is too great.—Proc. Kentucky Pharm. Ass. 1910, p. 91.

An editorial (Practical Druggist, 1910, v. 28, pp. 29-30) comments on what is considered unjust prosecution in connection with the food and drugs act, and states that the Department since the enactment of the food and drugs law has persistently refused to instruct the manufacturer in advance as to the claims he may or may not make on his label.

Kebler, L. F., discusses the aims of the Bureau of Chemistry in the enforcement of the food and drugs law.—Proc. Maryland Pharm. Ass. 1910, pp. 113–123.

Beilstein, Christian, asserts that there is still a great deal of inconsistency in the methods employed by the Government inspection stations in controlling the quality of imported drugs, and that there is too strong a tendency to be over technical in the application of the law to cases of purely constructive adulteration.—Proc. N. W. D. A. 1910, p. 99.

An editorial (Omaha Druggist, Feb. 1910, v. 23, p. 19), commenting on the lack of interest shown in the enforcement of food and drugs laws, says: ''Americans as a nation are pretty apt to start a row over something, get good results, and then go to sleep. This seems to be what we have done with our pure food law.''

An editorial note (Drug. Circ. 1910, v. 54, pp. 484–489) points out that up to the present time more than 450 judgments obtained under the food and drugs act of June 30, 1906, have been published and that not all of these are well founded. A number of the judgments are reprinted in the abstract.

See also pp. 588–592.

An editorial (Am. Druggist, 1910, v. 56, p. 1) expresses the belief that the repeated and insistent discussion of sophistication of crude drugs is objectionable and that the pure food and drugs act is likely to be made odious by the attitude taken by some of the officials who are responsible for the enforcement of the law and the regulations.

The Board of Control reports a resolution recommending legislation to abolish the improper use of the words "adulteration" and "adulterated" in the publications of the Board of Food and Drug Inspection.—Proc. N. W. D. A. 1910, p. 374. See also p. 96.

Dohme, A. R. L., states that there are certain people in charge of the entrance of drugs into the port of New York who are zealous, over zealous perhaps, as to the requirements that they set upon these drugs, and excuse their attitude by the rather peculiar point of view that they must be more particular than ever as to the quality of drugs they admit into this country.—Proc. Maryland Pharm. Ass. 1910, p. 42.

Culbreth, D. M. R., thinks that the drug inspector who in his enthusiasm wants the 99 or 99.99 per cent pure drug is going to carry his methods a little too far.—*Ibid.* p. 47.

Shapard, H. C., thinks there should be a more liberal construction put upon the pharmacy law, as we consider it a great hardship upon the smaller dealers, who do not do enough business to justify them in employing a registered man, to compel them to shut up their stores when they are compelled to leave the house for a short time, or be fined.—Proc. Tennessee Pharm. Ass. 1910, p. 25.

Schneider, Albert, discusses the administration of the pure drugs law, Federal and State, and makes a number of suggestions regarding additional restrictions which he thinks would be desirable.—Pacific Pharmacist, 1909–10, v. 4, pp. 87–92.

Toms, Joseph E., discusses the enforcement of the food and drugs law during the year 1909–10, enumerates a number of Food Inspection Decisions and calls attention to the compilation of State pure drug laws published by the N. W. D. A.—Proc. N. W. D. A. 1910, pp. 56–57.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 77, February 21, part 2, p. 5), in a review of the enforcement of the pure food and drugs law during 1909, points out that although the efforts to amend the law in more or less important particulars were not successful there were many interesting developments in connection with these attempts and with reference to the enforcement of this act, especially in the way of court decisions of more or less authority.

An editorial (Pharm. Era, 1910, v. 43, p. 334), commenting on the enforcement of the pure drug laws, states that the favorable verdicts obtained in 202 suits, with only 3 defeats, is a remarkable showing made by Government officials.

An editorial (N. A. R. D. Notes, 1910, v. 10, pp. 1157–1159) discusses the light fines that have been imposed on offenders under the pure food and drugs law, points out that many of these fines are ridiculously small and expresses the fear that the officials in whose hands the enforcement of these laws lie are not doing their full duty to the American public at all times.

An editorial (Drug Topics, 1910, v. 25, p. 49) calls attention to Food Inspection Decision No. 112, which compels manufacturers to make changes in methods of labeling.

F. I. D. 112, pp. 3, contains an amendment to Regulation No. 28, referring to the labeling of derivatives; 113, 118 and 127 refer to the labeling of whisky and imitations thereof; 120 and 122 refer to the labeling of wines produced in the United States; and 117 refers to the use of certified colors.

A number of the Food Inspection Decisions and Notices of Judgment are reprinted in the J. Ind. & Eng. Chem. 1910, v. 2.

See also Am. Perf. 1910–11, v. 5, and drug journals generally.

2. POISONS AND NARCOTICS.

The Kings County Pharmaceutical Society recommends that lists of heroic poisons and of less potent ones be given in the next U. S. P.—Drug. Circ. 1910, v. 54, p. 254.

Watson, George Y., asserts that the great spread of drug-using such as morphine, cocaine and opium habit, is receiving most careful attention throughout this country and Canada. The different State associations are devising means and formulating laws whereby the illegal use of such drugs can be stopped and the traffic checked. The enactment of these laws means better conditions, and much good has already resulted therefrom.—Proc. North Carolina Pharm. Ass. 1910, p. 20.

Freerichs, Frank H., in discussing the sale of habit-forming drugs, points out the entire lack of National legislation and the insufficiency of State legislation to prevent the sale of such drugs.—Proc. Ohio Pharm. Ass. 1910, pp. 59–62.

Kebler, L. F., comments on the needs of a Federal poison law.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 408–411.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 77, January 10, pp. 7–8) calls attention to the interest manifested by manufacturers and wholesale dealers in proposed legislation to restrict the traffic in narcotic drugs.

West, Charles A., in the report of the committee on legislation, states that this committee has viewed with much concern the proposed legislation in Congress to regulate the transportation of habit-forming drugs in interstate and foreign commerse.—Proc. N. W. D. A. 1910, p. 316.

Wood, H. C., Jr., presents the report of the special committee on habit-forming drugs and recommends that the subject of legislation be referred to the Council on Health and Public Instruction. Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, pp. 3–4.

The Pennsylvania drug act provides that a drug is misbranded if the package fails to bear a statement on the label of the presence of any alcohol, morphine, opium, heroin, cocaine, alpha or beta eucaine, chloroform, chloral hydrate, cannabis indica, acetanilide, phenacetin, antipyrine or any derivative or any preparation of any such substance contained therein.—Drug Topics, 1910, v. 25, p. 277.

Hudson, T. G., reports that an inspection of the retail drug stores of Georgia discloses the fact that 813 druggists were keeping poison registers as the law requires, 375 were not keeping poison registers and 48 were exempt under the law in that they did not sell poisons.—Bull. Georgia Dept. Agric. 1910, No. 51, p. 18.

The law regulating the sale of narcotic drugs in Georgia is reprinted.—*Ibid.* pp. 159–161.

The regulations for the handling of poisons and drugs in Norway are reprinted.—Pharm. Post, 1910, v. 43, pp. 452–454; 463–464.

Freerichs, F. H., presents some observations regarding the sale of habit forming drugs and legislation pertaining thereto.—Proc. Ohio Pharm. Ass. 1910, pp. 58–62.

3. THE PHARMACOPŒIA AS A LEGAL STANDARD.

Rusby, H. H., discusses the relation of the Federal law to the Pharmacopœia.—Merck's Rep. 1910, v. 19, pp. 132–135. See also Midl. Drug. 1910, v. 43, pp. 685–691 and Bull. Am. Pharm. Ass. 1910, v. 5, pp. 110–118.

Eccles, R. G., thinks it is a sad pity that the Committee of Revision permitted itself to be extinguished by the pure food law. He thinks in time pharmacy will become the foot-ball of politicians.—Western Druggist, 1910, v. 32, p. 20.

Tobin, John M., expresses the belief that the framers of the food and drugs act builded wiser than they knew, when they included all that was contained within the covers of the U. S. Pharmacopœia and the National Formulary as standards for medicines.—Am. Druggist, 1910, v. 56, p. 240.

An editorial (N. York M. J. 1910, v. 91, p. 1020) notes that the substitution in the office of president of the U. S. P. C. of a chemist and Government official for a physician and therapeutist may be taken as indicative of the change in the status of the Pharmacopœia from that of a purely academic pronouncement to a book of legal standards.

Francis, John M., in discussing the future of the Pharmacopœia, points out that it is now a book of legal standards and should include not only chemical tests, but physiological tests, serum standards and serum tests, and in fact all tests which are necessary in order that somebody—somewhere and somehow—can examine all of the remedies employed and insure that they are of proper quality.—Proc. Michigan Pharm. Ass. 1910, p. 45.

Plaut, Albert, thinks that out of the criticism to which the Pharmacopœia has been subjected since the enactment of the Federal food and drugs act will come a new Pharmacopœia, decidedly an improvement.—Am. Druggist, 1910, v. 57, p. 385.

Cohen, Solomon Solis, states that the Pharmacopœia being a book of legal as well as professional standards, both rich and poor are entitled to its protection, and both elegant and cheap remedies must be included; both crude drug and active principle; and as many preparations, in reason, as physicians may desire.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 492.

Hunt, Reid, states that in connection with the frequently made argument that a number of the less widely used drugs should be retained in the U. S. P. in order to have legal standards for them and the suggested remedy of stating that the standards for drugs dismissed from the 8th revision shall continue to be valid, it is interesting to note that at least two foreign pharmacopœias (the French and the Servian) already follow the plan.—Proc. Pharm. Ass. 1910, v. 58, pp. 771–772.

Rusby, H. H., thinks that the Pharmacopœia is a legal instrument and should not be converted by the Committee of Revision into a text-book for the sole use of physicians.—Am. J. Pharm. 1910, v. 82, p. 62. See also Southern Pharm. J. 1909–10, v. 2, p. 310.

Beringer, George M., thinks that as a legal standard the U. S. P. can no longer remain a doctor's book or a druggist's formulary. Its character must be now still further broadened so as to serve its added function as the guide and standard for the manufacturer, importer, wholesaler and retail dealer in drugs, as the promulgator of official standards and methods for the chemist.—Western Druggist, 1910, v. 32, p. 496. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 769.

Remington, Joseph P., states that the Pharmacopœia is first of all a book of standards and a law book.—Am. Druggist, 1910, v. 56, p. 133. Also Midl. Drug. 1910, v. 44, p. 86.

Hallberg, C. S. N., asserts that laws are intended primarily for the benefit of the public and that the Pharmacopœia as a law book should represent standards that are attainable and lived up to.—Proc. Nebraska Pharm. Ass. 1910, p. 29.

Coblentz, Virgil, thinks that the Government must have standards for drugs and chemicals that are employed by manufacturers, and, while such standards would add to the Pharmacopœia many preparations and articles for which the physician has no use, it will be necessary to include them in the Pharmacopœia, otherwise the Government must establish a Pharmacopœia of its own.—Proc. Maine Pharm. Ass. 1910, p. 43.

Hancock, James E., expresses the belief that Government inspectors, by deciding against the qualities of this, and requiring a different standard for that, could in the course of several years so curtail the Pharmacopœia that one would not know what the requirements really were.—Proc. Maryland Pharm. Ass. 1910, p. 48.

Beilstein, Christian, says that the specific and rigid standards included in the Pharmacopœia and their enforcement under the food and drugs law has placed the man, whom the food and drugs law can not make honest any more than the eighth commandment did, upon the same plane of *prima facie* righteousness as his neighbor, who did not need the fear of the law to make him upright.—Proc. N. W. D. A. 1910, p. 97.

Kebler, L. F., thinks that in the main pharmacopœial standards are just and fair, that is, they are about right. In some cases, however, the standards are theoretical, academic, ideal, if you please, and that any attempt to enforce them would justify a great outcry.—Proc. Maryland Pharm. Ass. 1910, p. 117.

Rusby, H. H., points out that one of the most baneful possible conditions as to the power of the Pharmacopœia to cause errors of judgment, or to provide for unjust discrimination, or an accusation of it when it does not exist, is a want of definiteness in the expression of a standard. The Pharmacopœia is now replete with defects of this class. Many of its definitions are absolutely meaningless and a large number of its descriptions and directions are incapable of enabling a positive decision to be reached.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 441.

Mason, H. B., believes that the next Pharmacopœia will be less rigid, less arbitrary in establishing standards of the kind designated for oil of wintergreen, oil of betula and methyl salicylate.—Proc. Michigan Pharm. Ass. 1910, p. 71.

Sayre, L. E., discusses the adherence of pharmacists to the Pharmacopœia as the official standard and presents tables showing the results of examinations of suspicious samples.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1093–1098.

Wulling, Frederick J., states that the results of the many analyses made, point to the necessity of stricter adherence to the standards prescribed in the Pharmacopœia. Despite the many warnings lately given pharmacists, by the publication of analyses of inferior medicines, they do not seem to have become alert to the danger of prosecution that confronts them.—Northwestern Druggist, 1910, v. 11, Sept. p. 25.

Kalusowski, H. E., thinks that the Pharmacopœia being a legal authority should contain only the best available tests and that these should be stated in language that is clear and yet concise.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 89.

Rusby, H. H., thinks that the legal recognition of the U. S. P. rests upon certain well-defined and securely established facts and principles. In its revision are directly represented, upon an absolutely equal footing, all branches of both professions and it is eminently proper that such a work should receive Government recognition. On the other hand, without suggesting a criticism of the N. F., as to its character and origin, the very best that could possibly be said of it is that it emanates from one of these two professions only, and that it is wholly controlled by one of the organizations within that profession.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 441.

Flemer, Lewis, thinks that the National Formulary in its present form is not well adapted as a legal standard.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 15.

Wiley, H. W., believes that the work of pharmacopœial revision is one in which conscience should figure and in which all considerations other than those relating to the book itself, and the efficiency of its descriptions should be laid aside.—Pharm. J. 1910, v. 31 (85), p. 640.

Anselmino, A., in discussing the change of the official title of the Ph. Germ. from Arzneibuch für das Deutsche Reich to Deutsches Arzneibuch, points out that this is in keeping with the necessary steps that must be taken to recognize the new Pharmacopœia in the several states composing the Empire.—Ber. pharm. Gesellsch. 1910, v. 20, p. 537.

Parry, Ernest J. (Chem. & Drug. 76, No. 1575, 50–2) discusses the British Pharmacopœia as a legal standard.—Chem. Abstr. 1911, v. 5, p. 143.

4. SUPPLEMENT TO THE PHARMACOPŒIA.

Long, Eli H., is not sure that the Pharmacopœia should be revised oftener than every 10 years, though a supplement of information at the end of 5 years would be very useful.—Western Druggist, 1910, v. 32, p. 18.

The Journal of the American Medical Association (1910, v. 54, p. 1885) remarks that the decennial revision has been justly criticised as too infrequent, at least too inelastic, for these days of rapid progress. This has been remedied by granting authority to the committee "to prepare a supplement to the Pharmacopœia at any time they may deem such action desirable."

Sollmann, Torald, believes in more frequent revision of the Pharmacopœia, and thinks some new method of selecting drugs worthy of pharmacopœial recognition should be devised.—Practical Druggist, 1910, v. 27, p. 411.

Leffmann, Henry, thinks that a Committee of Revision should be designated which would have power to make necessary changes in the interval between revisions which should be made once in 5 years. The preparation of the revision should not occupy over one year. The circumstances which consumed 5 years in the last revision he thinks wholly inconsistent with the principle on which such a work is published.—J. Am. M. Ass. 1910, v. 54, p. 431.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 35) expresses the belief that it is probable that a supplement will be issued in five years in case provision is not made for the next Pharmacopœial Convention to follow in 1915.

Osborne, Oliver T., recommends the issuing of a supplement to the Pharmacopœia, in 1915, which shall make official such new drugs as have been proved to be of therapeutic value during the years of 1910–1915.—J. Am. M. Ass. 1910, v. 54, p. 50. See also Bull. Am. Pharm. Ass. 1910, v. 5, p. 235.

Kremers, Edward, points out that the present Committee of Revision has not even found it practicable to issue a supplement such as was authorized by the Convention in 1900, and he expresses the belief that the committee might justly be censured for this neglect.—Midl. Drug. 1910, v. 44, p. 2.

A resolution adopted by the Tenth International Pharmaceutical Congress in Brussels recommends the regular issuing of supplements to pharmacopœias so as to keep these books in touch with progress in the sciences.—Pharm. Post, 1910, v. 43, pp. 714, 727. See also Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 295, and Drug. Circ. 1910, v. 54, p. 600.

Benedict, A. L., thinks that annual additions, but not eliminations nor alterations liable to produce dangerous confusion to the Pharmacopœia, would seem desirable.—Western Druggist, 1910, v. 32, p. 17.

Wilbert, M. I., thinks that in view of the annual publication of N. N. R. which is being widely accepted as a dependable source of information regarding new and non-official remedies, the publication of supplements to the U. S. P. is not necessary.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 737.

Powell, William C., suggests the publication of a loose-leaf Pharmacopœia with frequent supplements or corrections which could be inserted with little trouble.—Proc. Maryland Pharm. Ass. 1910, p. 180.

Coblentz, Virgil, states that when the 8th revision first appeared, it was soon followed by a sheet of corrections and additions issued in order to accommodate the manufacturers, who had been running along and manufacturing chemicals according to their own ideas as to purity, and did as they pleased. Now here is a book that was going to be used by the Government as a standard, and it is necessary that we should aid it in meeting its requirements.—Proc. Maine Pharm. Ass. 1910, p. 42.

Remington, Joseph P., points out that the Committee of Revision met the criticism on the Pharmacopœia in a practical business-like way, by instituting public hearings and welcoming criticism from all sources. Criticism was disarmed and a supplement was issued by the Committee to remove every difficulty in the way of revision.—Midl. Drug. 1910, v. 44, p. 87. See also Am. Druggist, 1910, v. 56, p. 133, and Abstr. Proc. U. S. P. C. 1910, p. 24.

Kremers, Edward, states that errors have been found in all parts of the Pharmacopœia. Some of these have been corrected, others have been allowed to remain.—Midl. Drug. 1910, v. 44, p. 2.

Rosengarten, George D., points out that the present U. S. P. requirements with some few exceptions are comparatively readily attained, at least so far as chemicals are concerned.—Am. J. Pharm. 1910, v. 82, p. 27.

Taylor, Augustus C., thinks it would be desirable to issue annual supplements to the National Formulary so as to keep the book up to date.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 14.

England, J. W., thinks that supplements to the National Formulary should be issued *pro re nata*, once a year if necessary, and each purchaser should be furnished with such supplements without extra charge.—Drug Topics, 1910, v. 25, p. 114.

5. UNITED STATES PHARMACOPŒIAL CONVENTION.

DECENNIAL MEETING OF 1910.

The Tenth United States Pharmacopœial Convention was called to order by the Second Vice-President, Otto A. Wall, sr., at 10 a. m., May 10, 1910, in the New Willard Hotel, Washington, D. C.

Hon. Charles Nagel, Secretary of Commerce and Labor, in delivering the address of welcome, referred to the cordial cooperation between the Department of Agriculture and the Department of Commerce and Labor, the former being interested in making rules for the protection of the public, the latter in not having those rules go any further than is necessary, in order that commerce may not be unduly interfered with. He urged a more general cooperation in every field of activity, and suggested that the greatest aid that any citizen, or any aggregation of citizens, can give to the Government is to elevate the standards of their own concerns in such fashion that no interference and no regulation for the public good may be needed; in other words, the aim should be to find such standards as will not only afford protection to the public, but may be adopted by the Government itself as the standards to which all comers will have to conform.

Señor Calvo, the minister from Costa Rica, on behalf of Latin-America, congratulated the Convention upon the issue of the Spanish edition of the Pharmacopœia of the United States of America, expressing most earnestly the sincerest recognition of this significant proof of Pan-American confraternity, and suggesting a Pan-American Conference for the unification of all that pertains to the Pharmacopœia.

The address of President Horatio C. Wood, sr., reviewed the status and authority of the Convention, and urged the utmost conservatism with regard to changes in its constitution and organization. Great emphasis was laid upon the important function exercised by the Committee on Credentials and Arrangements, in safeguarding the membership of the Convention. Brief reference was made to the International Conference for the Unification of the Formulæ of Heroic Medicaments, called by the Belgian Government at Brussels, in September, 1902, and the opinion expressed that, while the Committee of Revision had in great measure conformed to its recommendations, its failure to do so completely seemed to be the one blot on their work.

The report of the Secretary, Henry M. Whelpley, dealing with the routine work of the office, was adopted as read. The accumulated correspondence of the decade had, by direction of the Board of Trustees, been turned over to the historian of the American Pharmaceutical Association for permanent preservation.

The report of the Treasurer, G. Wythe Cook, covered only the period from November 15, 1902 to April 30, 1910, the Treasurer elected by the Convention of 1900, William M. Mew, having died, September 19, 1902. The financial summary for the complete decade was submitted by the Acting Chairman of the Board of Trustees, James H. Beal, and may be found on pages 57–59 of the Abstract of Proceedings of the Convention.

The report of the Board of Trustees, presented by Acting Chairman Beal, dealt with finance, meetings, Spanish translation, protection of copyright, and other items of routine. It was noted that, notwithstanding the adoption of the Pharmacopœia as a standard by Federal and State Governments, and the active propaganda carried on by various pharmaceutical and medical associations and journals, the sales of the book had not been materially greater than for the corresponding years following the appearance of the preceding revision. The enlargement of the Committee of Revision, from 25 to 50 members, and the differentiation of function of Executive and General Committee of Revision was urged as a measure which would do more to expedite the work of revision than any of the various suggestions which had been made. The cooperation of the Public Health and Marine-Hospital Service, in the publication of bulletins on Changes in the Pharmacopœia of the United States, and the Digests of Comments, together with the investigations respecting the solubilities and melting points of official substances, was acknowledged and a vote of thanks recommended for these contributions to the conservation of the public health and to the progress of American medicine and pharmacy.

The report of the Chairman of the Committee of Revision, Joseph P. Remington, was chiefly historical and explanatory. "The enormous sale of the book (nearly 40,000 copies the first year), far exceeding those of any previous issue," were alleged to be due, not to the passage of the food and drugs act, but to an awakened interest in the United States Pharmacopœia. It was shown that the issue of the "Additions and Corrections," in 1907, to eliminate tests which were entirely too severe or were theoretical or academic, was one of the most important acts of the Committee. Attention was called to certain errors, none of which could be said to be vital and not one of them dangerous to life. The favorable comments on the completed work were said to have far exceeded in importance and value the defects which are inherent in all human endeavor. A plea was made that the next committee should not be bound too strictly in matters of detail by the votes of the Convention whose will must always be kept strictly in view and never departed from except upon rare occasions when necessity demands a change. It was suggested that provision be made for future contingencies, through a confirmatory vote from the officers of the Convention and the Trustees, should it be necessary to contravene the specific enactments of the Convention. In conclusion, the "General Principles" were referred to as only a nucleus, subject to revision and addition by the Convention; and attention was called to the fact that American medicine and American pharmacy can no longer afford to ignore the opinions of those who have not enjoyed the privilege of living in this Republic, we being now an integral part of the Congress of Nations.

At the afternoon session, the proposed amendments to the constitution, recommended by the Board of Trustees and providing for the admission to membership in the Convention of representatives from the United States Department of Agriculture, the Department of Commerce and Labor, the Association of Official Agricultural Chemists, the Association of State and National Food and Dairy Departments, the National Wholesale Druggists Association, and the National Dental Association, and the proposition to change the title of the Committee of Revision to General Committee of Revision, were unanimously adopted. The proposition, also made by the Board of Trustees, to reduce the number of delegates from each constituent organization from three to one, was defeated. A proposal from the floor, to admit delegates from the National Association of Retail Druggists, was ruled out of order by the Chair.

The committee, to which was referred the recommendations of the President's Address, approved the admission of the University of Havana to representation in future conventions, and, while endorsing the principle of geographic distribution in the choice of the General Committee of Revision, held that practical fitness for the work should be the prime requisite in the selection of the Executive Committee of Revision; it also paid tribute to the work of both the President of the Convention and the Chairman of the Revision Committee. The report was unanimously adopted.

With reference to the report of the Board of Trustees, the same committee favored the enlargement of the Revision Committee to a General Committee of fifty, approved the simplified plan of accounts used by the Board in regard to expenditures and receipts, endorsed the expression of thanks for the aid rendered by the Public Health and Marine-Hospital Service, recommending that a letter to this effect be addressed by the Secretary of the Convention to the Surgeon-General of the Bureau, and expressed appreciation of the services of individual members of the Board in financing the earlier work of revision. This report was also unanimously adopted, as were the amendments to the By-Laws proposed by the Trustees. The morning of the second day's sessions of the Convention was occupied chiefly by the report of the Nominating Committee and the election and installation of officers, Board of Trustees and Committee of Revision. A separate ballot was required for the election of President, and the Secretary cast the ballots of the Convention successively for each of the remaining officers and the several members of the Board of Trustees, and for 49 members of the Committee of Revision. One of the nominees for the Committee of Revision was declared ineligible, the Chair ruling "that any one elected a delegate here who has not come, is not a member of this Convention, can not be elected a member of any committee or as an officer." Three ballots were required to fill the vacancy thus occasioned.

The President-elect, Harvey W. Wiley, in taking the chair made a brief address in which he expressed the opinion that the duties of the office were mainly to see that other people do their duty and do it promptly, and he promised the prompt beginning and vigorous prosecution of the work of revision of the Pharmacopœia. The purpose of the revision, he declared, was, if possible, to make a book which should be beyond criticism, one which will require no further explanation or elucidation in order to make its meaning clear, and to make it what it now is under the law, a guide not only for pharmacists and physicians of the country, but for those who are engaged and are to be engaged in the enforcement of the salutory laws which have been enacted by Congress and the legislatures of the various States looking to the control of the food and drug commerce of this country.

A proposed amendment to the By-Laws, providing for an annual assessment upon the organizations sending delegates to the Convention, was referred to the Board of Trustees. Similar action was taken with reference to a communication from the Medical Society of New Jersey, embodying certain ethical rules for the guidance of physicians and pharmacists in their relations with each other and with the public.

The afternoon session was devoted to a discussion of the General Principles which should govern the action of the General Committee of Revision, prefaced by the report of the Committee on the Report of the Chairman of the Committee of Revision. This report was unanimously adopted, endorsing the positions taken with reference to the avoidance of too great restrictions upon the freedom of the Committee of Revision, the admission of therapeutic sera, the provision of more adequate honoraria for the workers, and the popularization of the existing and of future Spanish translations of the Pharmacopœia.

The first item of the General Principles, that dealing with the Scope of the Pharmacopœia, elicited the most lengthy discussion. By a vote of 95 to 47, the Convention decided that "there should not be included rarely used substances or those whose value and use have not been established;" subsequently, this entire clause was stricken out, by a vote of 123 to 40. The phrase "standards of purity and strength, prescribed in the text of the Pharmacopœia, are intended to apply to substances which are used solely for medicinal purposes and when professedly bought, sold, or dispensed as such," was, by a vote of 65 to 38, so amended as to read: "standards of purity and strength, prescribed in the text of the Pharmacopœia, are intended solely to apply to substances which are used for medicinal purposes, or in determining the identity and purity of the same." The question of doses was also discussed somewhat at length, a proposition to introduce for potent drugs a maxim single and daily dose, being defeated by a vote of 49 to 101. A new item, referring to publicity, was introduced from the floor and adopted. The original recommendation, that "those compound preparations of approved value which are now official in the Eighth Revision be not excluded from the Ninth Revision," was stricken out. The item on solubilities was likewise introduced from the floor and adopted. With some other, minor, changes from the original draft, the General Principles, as finally adopted and which are of the nature of recommendations only, will be found on page 42.

At the third day's session, numerous recommendations and reports were referred to the Committee of Revision: A proposition, coming from the American Pharmaceutical Association and looking to the establishment of a General Editing Committee for the promotion of greater uniformity in form and style of publications; reports and recommendations from organizations, institutions and individuals with reference to the details of pharmacopœial revision, limitation of the number of vegetable preparations whose only valuable constituent is tannic acid, and of the prepartions of some of the more important drugs, such as iron, mercury, opium, aloes and rhubarb; the dimensions and delivery of an official medicine dropper; the inclusion of description of the pharmacodynamic characters of substances admitted to the Pharmacopœia, etc.

A proposition that the royalty charged publishers and authors for the use of the pharmacopœial text be greatly increased, was referred to the Board of Trustees. A recommendation for the formation of a committee on drug markets, to make a thorough investigation of the quality of crude drugs of commerce, both in this country and abroad, and to cooperate with the United States Government in such investigations was referred to the joint action of the Board of Trustees and the Committee of Revision.

The financial report being called for, it was presented in outline by the Chairman of the Board of Trustees, James H. Beal; the detailed statement of the finances of the Convention will be found on pages 68–90 of the "Abstract of Proceedings, United States Pharmacopœial Convention, 1910" (published by the Board of Trustees, November 30, 1910).

A discussion on the several propositions for increasing the revenue of the Convention resulted in the unanimous adoption of a resolution empowering the Board to make the price of the Ninth Revision of the Pharmacopœia such as will meet the proper expenses of the revision. With regard to the communication from the New Jersey Medical Society, the recommendation of the Board was adopted, endorsing the general declaration of ethical principles, and referring the communication to the Board of Trustees and General Committee of Revision jointly, with power to include the same, or a modification thereof, in the preface to the Ninth Revision of the Pharmacopœia.

Resolutions were adopted recommending a more general use of the Pharmacopœia on the part of physicians and pharmacists. The proceedings of the Convention were brought to a close by the adoption of a number of resolutions of appreciation and thanks, addressed to the various committees, officers and individuals and to the Department of Agriculture and the Public Health and Marine-Hospital Service for cooperation in the work of revision.

U. S. P. C. COMMENTS.

The proceedings of the U. S. P. C. are reported and commented on in all of the pharmaceutical and in many of the medical journals of the United States and Great Britain.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 77, May 16, p. 7) states that while the U. S. P. Convention was not a tame, insipid or colorless affair, still those who attended its sessions expecting to witness a three-ring circus, with physician, pharmacist and wholesale druggist as the performers must have felt disappointed.

An editorial (Merck's Rep. 1910, v. 19, p. 175) states that the proceedings of the Convention were conducted and conclusions arrived at far more smoothly than had been expected in view of the many opposed views that have been given publicity concerning the scope of the revised work.

Dohme, A. R. L., states that anyone who attended the Convention must have been impressed with the fact that above all things it was a truly representative body, and that our Pharmacopœia is being revised by a committee of men representative of all the interests of the country and of all classes and parts of the country. Of the General Committee of Revision just elected the following classification is approximately correct: Physicians in practice, 4; medical college professors, 7; retail pharmacists in practice, 9; pharmaceutical college professors, 18; wholesale druggists, 1; manufacturing chemists, 5; U. S. Government employees, 4; analytical chemists, 2.—Proc. North Carolina Pharm. Ass. 1910, p. 84.

Engstrom, Ernst O., in a report of the U. S. P. Convention, asserts that it was decidedly a democratic convention, everybody had their say, and when the discussions were all in, it was found that the proposed "General Principles" were accepted with very slight alterations.—Proc. Massachusetts Pharm. Ass. 1910, p. 85.

Jensen, Peder, states that as a deliberate body the U. S. P. Convention leaves nothing to be desired whether in precision of methods or strenuousness.—Pacific Drug Review, 1910, v. 22, Aug., p. 20. (See also Oct., p. 16.)

Hallberg, C. S. N., is reported as saying that the U. S. P. Convention struck the swiftest pace that he ever witnessed and it was maintained to the end. To put over so formidable a programme before so vast an assembly, of anything but harmonious delegates, within the short space of two and one-half days was a marvel, and now, after it is all over, will remain a record-breaker.—Meyer Bros. Drug. 1910, v. 31, p. 177.

Kahn, Joseph, in his report as delegate to the United States Pharmacopœial Convention, remarks that the striking features of the Convention were: (1) The lack of a fixed programme; (2) the failure to publish the "General Principles" at least one month prior to the Convention, so as to enable the delegates to discuss them intelligently; (3) the short duration of the Convention.—Proc. New York Pharm. Ass. 1910, p. 63.

An editorial comment (Drug. Circ. 1910, v. 54, p. 265), on the U. S. P. C. 1910, states that the most remarkable feature of it was the smoothness with which the proceedings were conducted and the utter lack of anything having the semblance of a factional fight on the floor of the meeting hall.

An editorial (Bull. Am. Pharm. Ass. 1910, v. 5, p. 324) states that the U. S. Pharmacopœial Convention in Washington was, from a pharmaceutical standpoint, a "success pyramidal," both in attendance, in maintained interest and tangible results. The programme, practically as decided on by the American Pharmaceutical Association at the meeting in Richmond, was carried out completely. The U. S. P. was not recaptured by the medical profession.

Hollenburg, Oscar, reports that the meeting was composed of about 75 per cent of college of pharmacy professors, pharmacists and chemists, the balance, 25 per cent, being physicians. So you can readily see that the Pharmacopœia will be compiled by pharmacists, as they held the upper hand in all disputes.—Proc. North Dakota Pharm. Ass. 1910, p. 44.

Francis, J. M., reports that, as it was finally made up, there were about members of the medical profession on the Revision Committee, but it should not be overlooked that in a committee totaling 50 the physicians were really entitled to 25 members. An ample number of nominees were presented by the special committee of physicians in the nominating convention, but for some reason when the smoke cleared away the pharmacists predominated by a heavy majority.—Proc. Michigan Pharm. Ass. 1910, p. 42.

An editorial (Bull. Pharm. 1910, v. 24, p. 225) expresses regret that there are but nine medical representatives among the revisers, and, while this was due to the fact that the pharmaceutical contingent was slightly in the majority, the belief is expressed that it will be found desirable in the future so to amend the constitution as to provide arbitrarily for a specified number of physicians on the General Committee. A few of the medical delegates were inclined to complain at Washington that they had been given short shrift.

Bodemann, Wilhelm, reporting on the U. S. P. C., says that the nominating committee session of the U. S. P. Convention can best be described as an endurance test. The doctors and pharmacists split into two caucuses, each to submit 50 names to the entire committee, out of which fifty were to be selected. The doctors concluded their labors early and hurried away, while we druggists, accustomed to long hours, stuck it out, and when the result was announced at 4.15 A. M., the pharmacists scored a big majority of the Revision Committee, and thus ended the scare that the doctors were to capture the Convention.—Proc. Illinois Pharm. Ass. 1910, p. 68.

Remington, Jos. P., discusses the reason why pharmacy won at the U. S. P. Convention which met on May 10, 1910.—Proc. Texas Pharm. Ass. 1910, pp. 121–126.

Jensen, Peder, states that the general impression he received of the school men present at the Pharmacopœial Convention was marred by the altogether too-willing compliance of some of these men with the demands of the manufacturing influences, deliberately inimical to the best interests of the Pharmacopœia.—Pacific Drug Review, 1910, v. 22, Oct., p. 18.

Wilbert, M. I., thinks that the United States Pharmacopœial Convention of 1910 will prove to have been the beginning of a new era in matters pharmacopœial, though the ultimate outcome at the present time is quite problematic.—Am. J. Pharm. 1910, v. 82, p. 257.

Walton, L. L., presents the report of delegates to the United States Pharmacopœial Convention and gives a table showing the pharmaceutical and medical interests represented in the General Committee of Revision.—Proc. Pennsylvania Pharm. Ass. 1910, pp. 41–42.

Kraemer, Henry, presents a report of the United States Pharmacopœial Convention of 1910, in which he discusses the "General Principles" to be followed, presents a list of the members of the General Committee of Revision, and reproduces the ethical rules for guidance of physicians and pharmacists in their relations with one another.—Am. J. Pharm. 1910, v. 82, pp. 267–282.

An editorial (Bull. Pharm. 1910, v. 24, p. 267) notes that the code of ethics was referred to the Board of Trustees, and at the last session the Board recommended that the Convention indorse the general principles and refer it to the Revision Committee and Board of Trustees jointly, with power to print the code or some modification of it in the preface to the next edition of the U. S. P.

The Board of Control reports that the fact, that virtually all of the recommendations of the committee of the N. W. D. A. were adopted by the Pharmacopœial Convention, is the best evidence that its personnel was eminently fit for the work.—Proc. N. W. D. A. 1910, p. 381.

Davis, Charles H., states that not so much opposition to the present edition of the Pharmacopœia developed at the Convention as was expected, probably due in some part at least to lack of organization on the part of those who favored a decided change in the revision.—Proc. Maine Pharm. Ass. 1910, p. 37.

An editorial (Bull. Pharm. 1910, v. 24, p. 267), commenting on the various schemes proposed at the Convention, remarks that it seems to savor of Russian autocracy to compel the use of the Pharmacopœia by statute. Of course, there is no doubt that every pharmacist ought to have every new revision, but to cram it down his throat is a little un-American. Let him suffer the consequences if he does not keep up to date. Teach him by experience. Let him stand a few prosecutions for handling inferior, adulterated or deteriorated substances.

Austin, A. O., learned, from the report of the chairman of the Revision Committee, that the sale of the U. S. P. VIII had far exceeded any other edition and this was especially noticeable before it was recognized by the Government as a standard, thus showing its increase in favor over previous editions.—Proc. Vermont Pharm. Ass. 1910, p. 83.

Jensen, Peder, reports his impressions of the Pharmacopœial Convention and comments at some length on the scope of the Pharmacopœia and the method of its revision.—Pacific Drug Review, 1910, v. 22, Oct., pp. 16–20.

An editorial (Nat. Druggist, 1910, v. 40, p. 257), in discussing the United States Pharmacopœial Convention, expresses the belief that pharmacopœial revision will be along conservative lines.

An editorial (Bull. Pharm. 1910, v. 24, p. 2) notes that the Revision Committee will of course be bound and limited by the policies laid down by the convention itself, and refers to the "General Principles" established by the last Convention.

Wiley, Harvey W., discusses the Pharmacopœial Convention of 1910 and calls attention to the responsibilities resting on members of the Board of Trustees and members of the Committee of Revision.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 598–608. See also Am. Druggist 1910, v. 57, pp. 296–300, and J. Am. M. Ass. 1910, v. 55, p. 2008.

Eberle, E. G., calls attention to the history of the U. S. P.—Proc. Tennessee Pharm. Ass. 1910, p. 46.

Wilbert, M. I., in an article on the makers of the Pharmacopœia, reviews the history of the U. S. P.—Drug. Circ. 1910, v. 54, pp. 217–224.

Eager, J. M., gives an account of Lyman Spalding, the originator of the Pharmacopœia of the United States.—Merck's Rep. 1910, v. 19, p. 239.

An editorial (Bull. Am. Pharm. Ass. 1910, v. 5, p. 5) points out that neither the U. S. Pharmacopœial Convention nor the American Pharmaceutical Association are private corporations. They are both created by the corporation act of the District of Columbia, passed by Congress for the purpose of endowing associations of persons with such public functions as may facilitate their work within the territory of the United States.

6. GENERAL PRINCIPLES TO BE FOLLOWED IN REVISING THE PHARMACOPŒIA.

1. SCOPE OF THE PHARMACOPŒIA.

We recommend that the Committee of Revision be authorized to admit into the Pharmacopœia any medicinal substance of known origin, but no substance or combination of substances shall be introduced if the composition or mode of manufacture thereof be kept secret, or if it be controlled by unlimited proprietary or patent rights and the list of substances should be carefully selected, with standards for identity and purity, as far as possible. Substances used only for technical purposes should not be admitted to the next Pharmacopœia, and a statement should be placed in the preface to the effect that standards of purity and strength, prescribed in the text of the Pharmacopœia, are intended solely to apply to substances which are used for medicinal purposes or in determining the identity and purity of the same.

2. DOSES.

We recommend that after each pharmacopœial article (drug, chemical, or preparation) which is used or likely to be used internally or hypodermically, the committee be instructed to state the average approximate (but neither a minimum nor a maximum) dose for adults, and, where deemed advisable, also for children. The metric system to be used, and the approximate equivalent in ordinary weights or measures inserted in parenthesis. It is to be distinctly understood that neither this Convention nor the Committee of Revision created by it intends to have these doses regarded as obligatory on the physician or as forbidding him to exceed them whenever in his judgment this seems advisable, the committee should be directed to make a distinct declaration to this effect in some prominent place in the new Pharmacopœia.

3. NOMENCLATURE.

We recommend that changes in the titles of articles at present official be made only for the purpose of insuring greater accuracy, brevity, or safety in dispensing, and to eliminate therapeutically suggestive titles. In the case of newly admitted articles, it is recommended that such titles be chosen as are in harmony with general usage and convenient for prescribing, but in the case of chemicals of a definite composition the scientific name should be given at least as a synonym.

There should also be inserted, after each article used by physicians in prescriptions, a carefully considered abbreviated name, which may be known as an official abbreviation, in order that uniformity may be established throughout the country, with the object of preventing mistakes in reading and compounding prescriptions, and further, to serve as authorized abbreviations in labeling the store furniture of the pharmacist.

4. SYNONYMS.

We recommend that the list of synonyms should be enlarged for the next revision, and the synonyms printed in the text of the Pharmacopœia, immediately after the English name of the substance. A statement should be made in the preface of the Pharmacopœia, that substances labeled with an official synonym, must comply with the same standards, tests and requirements as are demanded for the official article under any name.

5. PURITY AND STRENGTH OF PHARMACOPŒIAL ARTICLES.

We recommend that the committee be instructed to revise as carefully as possible the limits of purity and strength of the pharmacopœial chemicals and preparations for which limiting tests are or may be given. While no concession should be made towards a diminution of medicinal value, allowance should be made for unavoidable, innocuous impurities or variations due to the particular source or mode of preparation, or to the keeping qualities of the several articles.

The "Purity Rubric," which limits the percentage of innocuous impurities, as introduced into the Eighth Revision, should be continued, and tests and requirements should be appended to each article carrying a "Purity Rubric."

In the case of crude drugs and natural products, the limits of admissible impurities should be placed at such a figure as to exclude any that would not be accepted by other countries.

6. INTERNATIONAL STANDARDS.

The International Conference for the Unification of Formulas for Potent Remedies performed a signal service for all countries by recommending the various pharmacopœias of the world to adopt certain standards for potent medicines. It is recommended that the next Committee of Revision adopt these standards, but it is believed that it would be unwise to require the acceptance of the details of pharmaceutical or other process recommended by the International Conference.

If the finished product conforms to the International standards we believe that each country should be left free to adopt such detail and manipulation as may seem best. Nothing should prevent, however, the adoption of the recommendations of the conference, as to details, if in the opinion of the next Committee of Revision, by so doing, the Pharmacopœia can be improved.

7. GENERAL FORMULÆ.

It is recommended that general formulæ be introduced, as far as the particular nature of the several drugs will permit, for fluid extracts, tinctures, and such other preparations as are made by identical processes, and that the general formula to be followed in each case be merely indicated by reference.

8. APPENDING A LIST OF PREPARATIONS IN WHICH AN OFFICIAL ARTICLE IS USED.

It is recommended that, especially for the convenience of practicing physicians, there should be appended after each article in the text a list of the official preparations in which it is used.

A few exceptions may be made to this in such cases as water, alcohol, glycerin, sugar, etc.

9. ALCOHOLIC PERCENTAGE IN OFFICIAL PREPARATIONS.

It is recommended that a range of volume content, of absolute alcohol, be stated in the Pharmacopœia, for each preparation containing alcohol.

10. ASSAY PROCESSES.

We recommend that the committee be instructed to introduce assay processes for as many of the potent drugs and preparations made therefrom as may be found practicable, provided that the processes of assay are reasonably simple (both as to methods and apparatus required) and lead to fairly uniform results in different hands. As regards the products of such assays, tests of identity and purity should be added wherever feasible.

It is recommended that biological tests or assays, when accurate and reliable, may be admitted.

11. SERUMS AND OTHER BIOLOGICAL PRODUCTS.

It is recommended that serums and other biological products, of approved usefulness, if standardized by the Government or one of the departments, may be admitted to the next Revision of the Pharmacopœia.

12. WEIGHTS AND MEASURES.

It is recommended that the committee be instructed to retain the metric system of weights and measures as adopted in the Eighth Decennial Revision.

13. SUPPLEMENT.

It is recommended that the Committee of Revision be authorized to prepare a supplement to the Pharmacopœia at any time they may deem such action desirable.

14. PUBLICITY.

It is recommended that the General Committee of Revision make public, for comment and criticism an abstract of new descriptions and standards and of changes in descriptions and standards proposed, before final adoption.

15. ATOMIC WEIGHTS.

It is recommended that the system of atomic weights, authorized by the International Committee ($O=16$), be adopted for the next Revision.

16. PHYSICAL CONSTANTS.

It is recommended that official methods for taking physical constants be inserted in the "Introductory Notices," and these shall apply to all articles in which physical constants are officially used, unless otherwise specifically excepted.

17. STANDARD TEMPERATURE.

It is recommended that the standard temperature of 25° C. (77° F.) be retained, as used in the present Revision (except in the case of alcohol), and that a table be inserted in the appendix for corresponding figures at 15° C. (59° F.).

18. COMPOUND PREPARATIONS.

It is recommended that the introduction of new compound preparations be discouraged as far as possible.

19. PHARMACOGNOSTICAL DESCRIPTIONS.

It is recommended that, with the description of a crude drug, there be included brief, pharmacognostical descriptions, both macroscopic and microscopic where practicable, and there should be added a statement of the appearance of the structural elements in the powder, when examined microscopically, as a means of detecting adulteration.

20. POWDERED DRUGS.

It is recommended that, in the next Pharmacopœia, powdered drugs be required to represent the entire drug unless specifically stated otherwise. Where the drug can be powdered without residue this should be required; in other cases the amount of allowable tailings, gruffs, or residue should be determined and inserted in the text.

21. DIAGNOSTICAL REAGENTS.

It is recommended that there be included in the next Pharmacopœia, such reagents, with standards for strength and purity, as are needed for the proper execution of tests that are valuable and important in the making of a correct diagnosis.

22. DATE WHEN THE NEXT PHARMACOPŒIA BECOMES OFFICIAL.

It is recommended that the Committee of Revision print upon the title page of the next Pharmacopœia a definite date, reasonably distant from the actual date of publication, announcing when the new Pharmacopœia is intended to go into effect and to supersede the preceding one.

23. PRECEDENTS.

In all matters not specially provided for, in these "General Principles" the rules established for previous revisions, if there are any, should generally be followed.

24. SOLUBILITIES.

It is recommended that the degree of solubility of drugs in various solvents be given as extensively as possible.

W. G. Gregory presented the following communication and moved the adoption of the resolutions:

To the United States Pharmacopœial Convention:

GENTLEMEN: At the final session of the American Pharmaceutical Association, Saturday May 7, 1910, it was voted that the publications of the Association be edited to conform with rules for form and style to be adopted by a committee comprising representatives of the Association and such others, State or National, public or private as might coöperate in a movement to secure greater uniformity. Other associations were to be invited to nominate representatives to the General Editing Committee, and it was specifically provided that the matter be brought to the attention of the Pharmacopœial Convention at the earliest practicable moment. In accord with such instructions we take this opportunity of presenting the subject and, with a view to expediting action thereon, offer these resolutions:

"1. That this Convention heartily approves the movement and will actively coöperate with other associations in an effort to secure greater uniformity by the adoption of general editing rules for form and style.

"2. That the Executive Committee of Revision appoint a representative on the General Editing Committee."

According to an amendment by George M. Beringer the resolutions were referred to the General Committee of Revision.

On motion of F. G. Wheatley the following resolutions were referred to the General Committee of Revision with a recommendation for favorable action.

1. *Resolved*, That this Convention favor decreasing the number of vegetable preparations whose only valuable constituent is tannic acid.

2. *Resolved*, That this Convention favor decreasing the number of preparations of some of the more important drugs, for example, iron, mercury, opium, aloes, rhubarb.

On motion of William H. Seaman the following was recommended to the General Committee of Revision for adoption:

Recommended, That the official medicine dropper have its delivery end 3 millimeters in external diameter and adapted to deliver 20 drops of distilled water to a gramme at 16 degrees C.

On motion of Leo Eliel, seconded by George M. Beringer, the following resolution was referred to the Board of Trustees with a favorable recommendation:

Resolved, That this Convention recommend to the Board of Trustees that the royalty charged to publishers or authors for permission to use the text of the U. S. Pharmacopœia be greatly increased.

The following recommendation, as a special heading, Pharmacodynamic Character, under the head of General Principles, was offered by H. P. Hynson and, on motion, referred to the General Committee of Revision:

Conferring upon it power to act, this Convention respectfully recommends to the General Committee of Revision that it consider the advisability and propriety of including with the descriptions of the several articles that are to be recognized in the ninth revision of the Pharmacopœia, their pharmaco-dynamic character under some one of three divisions, to wit, (*a*) Positive, with description; (*b*) negative, as nil; (*c*) undetermined, or in such manner as the General Committee of Revision may deem most helpful to all concerned.

The following recommendation coming from the American Pharmaceutical Association was presented by A. B. Lyons and, on motion of W. L. Cliffe and George M. Beringer referred to the joint action of the Board of Trustees and the Committee of Revision.

The recommendation is the formation of a committee on drug markets; that the Committee of Revision be requested to appoint a special committee to make a thorough investigation of the quality of crude drugs in commerce, both in this country and abroad, and to coöperate with the United States Government departments in such investigations, and that this committee be instructed to endeavor to determine the proper limits as to variability due to soil and climatic conditions or improper handling, and to suggest such improvements as can be introduced in selecting and marketing such wares.

The following recommendation, offered by C. S. N. Hallberg was referred to the General Committee of Revision:

Sterilization—That a chapter on sterilization be introduced describing the proper methods for sterilizing medicaments and indicating to what preparations each method is especially applicable.

J. H. Beal, on behalf of the Board of Trustees, made the following report on the general declaration of ethical principles, which, on motion, was adopted:

The Board reports upon a general declaration of ethical principles which was referred to them for consideration yesterday, as follows: "That the Convention endorse the general declaration of ethical principles contained in the report, and that the report be referred to the Board of Trustees and General Committee of Revision jointly, with power to include the same or a modification thereof in the preface to the Ninth Revision of the Pharmacopœia."

COMMENTS ON GENERAL PRINCIPLES.

Kraemer, Henry, in a report on the U. S. P. Convention 1910, reproduces the general principles to be followed and expresses the belief that the U. S. P. IX ought to be, as he believes it will, a book of the times, suited to the modern demands and practices of medicine and pharmacy in the best sense of the words and at the same time adapted to the legislative requirements of the Government, which supplements the united efforts of physicians and pharmacists in devising approved and acceptable standards for medicines by giving them the weight and authority of legal standards.—Am. J. Pharm. 1910, v. 82, pp. 267–282.

Wilbert, M. I., thinks that the general principles adopted by the Convention for the guidance of the Committee of Revision are well worthy of careful consideration on the part of those interested in the revision of the Pharmacopœia. These general principles appear to leave the responsibility for the scope and content of the Pharmacopœia as well as many of the details of the revision entirely with the Committee of Revision.—*Ibid.* p. 258.

The Bulletin of Pharmacy (1910, v. 24, p. 233) reports that the paragraph of the "General Principles" referring to the scope of the Pharmacopœia originally contained a clause inferentially permitting the committee to retain and admit drugs for which there is a wide use irrespective of their proved therapeutic value. The final result was that the clause was stricken out and the whole thing left to the judgment of the Revision Committee with no instructions from the Convention.

Jensen, Peder, states that the methods used by the managers of the Pharmacopœial Convention, of deliberately hoodwinking the delegates present, were really possessed of a great degree of humor, and he does not credit the Convention with an over amount of acute perception that some of the proposals were not overwhelmingly voted down.—Pacific Drug Review, 1910, v. 22, Oct., p. 18.

Austin, A. O., notes that the recommendations of the U. S. P. C. are not obligatory upon the Revision Committee but will be followed as far as possible.—Proc. Vermont Pharm. Ass. 1910, p. 87.

An editorial (Am. Druggist, 1910, v. 56, p. 305) points out that the general principles laid down follow in the main those that governed the eighth revision of the Pharmacopœia, the most salient differences being the instruction to the committee to publish in abstract changes in standards and descriptions and new standards and descriptions before final adoption, the introduction of biological products, and of a chapter on sterilization.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 35), commenting on the possible changes in the U. S. P., points out that the Convention and the Committee of Revision must guard against radical changes that are not constructive or demanded in order to improve the real value of the Pharmacopœia.

Hunt, Reid, discusses some problems of pharmacopœial revision.—J. Am. M. Ass. 1910, v. 54, pp. 173–175.

Pusey, Hartzell and Jackson present the report of the committee of the Section on Dermatology on the revision of the Pharmacopœia.—*Ibid.* p. 1956.

Taussig, Byford and Hunner present the preliminary report on the revision of the U. S. P., from the A. M. A. Section on Obstetrics and Diseases of Women.—*Ibid.* p. 1457.

A list of the general principles endorsed by the Medical Society of the State of New York is reprinted.—Drug. Circ. 1910, v. 54, p. 255.

A list of the general principles endorsed by the Kings County Pharmaceutical Society is reprinted.—*Ibid.* p. 254.

The conclusions of the New York Branch of the A. Ph. A. regarding general principles for the guidance of the U. S. P. Committee of Revision are reprinted.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 287–288. Also Am. Druggist, 1910, v. 56, p. 256.

The general principles for the revision of the U. S. P. endorsed by the Chicago Branch of the A. Ph. A. are reprinted.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 296–297.

The general principles for guiding the revision of the U. S. P. endorsed by the City of Washington Branch are reprinted.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 292–294. See also Proc. Am. Pharm. Ass. 1910, v. 58, pp. 25–26.

Seltzer, Leonard A., reports resolutions adopted by a joint meeting of physicians and druggists at Detroit, which declare that the Pharmacopœia should be the accepted standard for medicinal prescribing.—Bull. Pharm. 1910, v. 24, p. 169.

The Ohio Valley Druggists Association presents a number of suggestions for changes in the U. S. P. and the N. F.—Proc. Ohio Pharm. Ass. 1910, pp. 66–67.

Beringer, George M., points out that the report of the A. Ph. A. committee on U. S. P. represents the individual views of the 10 members of that committee, no attempt having been made to harmonize their views.—J. Am. M. Ass. 1910, v. 54, p. 395.

Hunt, Reid, presents the report of the A. M. A. Committee on Pharmacopœia and a summary of the vote recorded thereon.—*Ibid.* p. 2088. See also Tr. Am. M. Ass., Sec. Pharm. and Therap., 1910, pp. 4–12.

7. PUBLICATION AND CONTROL.

Leffmann, Henry, thinks the United States Government should summon the Convention and provide for the expenses of the delegates. There is no need for the general attendance that has become customary of late years. A convention composed of 10 delegates each from the American Medical Association and the American Pharmaceutical Association and 3 each from the Army, Navy and Marine-Hospital Service would be as representative as any that has ever assembled for such a purpose. The publication should be carried out by the United States Government. Thus the book would become in reality the United States Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 431.

Melvin, J. Tracy, thinks that the work of revision and publication should be done by the U. S. Government. The present conventions are carefully engineered by pharmacist leaders.—Western Druggist, 1910, v. 32, p. 19.

An editorial (Pharm. Era, 1910, v. 43, pp. 1–2) discusses the possible publication of the U. S. P. by the Government, and states that ever since the present Pharmacopœia was accorded official recognition under the Federal Food and Drugs Act of 1906, there have come to the front arguments that the Government should prepare its own standards.

A number of individual opinions on the control of the U. S. P. by the Government, are reprinted.—*Ibid.* pp. 25–35.

An editorial (Bull. Pharm. 1910, v. 24, p. 49) asserts that a governmental pharmacopœia would lack catholicity, practicality and breadth, and would be in utter violation of the American principle of self-government.

Coblentz, Virgil, in discussing the use of the Pharmacopœia as a standard for drugs, says, "It looks to me as though the time is coming when the Government will take over the entire pharmacopœial revision. I will be sorry to see that day come."—Proc. Maine Pharm. Ass. 1910, p. 44.

Carmichael, T. H., comments on some of the possible objections to the publication of the United States Pharmacopœia or National Formulary by the United States Government unless the Homœopathic Pharmacopœia of the United States were also included.—Hahnemann. Month. 1910, v. 45, pp. 134–136.

Kraemer, Henry, in a review of the Ph. Ndl. IV, points out that while this book is revised by authority of the Government, yet strictly speaking none of the members of the commission are Government officials. The commission is a small one, and the members are directly responsible for the work.—Am. J. Phar. 1910, v. 82, p. 526.

Beal, J. H., discusses a Government owned Pharmacopœia, and points out that Government officers and agents can make rules and regulations only to carry into effect the enactment of a constitutional law making body, and concludes that the present method of revising the Pharmacopœia, barring some easily changed details, is ideal.—Midl. Drug. 1910, v. 43, pp. 670–672. See also p. 695.

Benedict, A. L., thinks that at present the actual control of the Pharmacopœia is virtually a private matter.—Western Druggist, 1910, v. 32, p. 17.

An editorial (New Idea, 1910, v. 32, p. 3) comments facetiously on the proposition to have the U. S. P. published under Government auspices.

Wulling, F. J., discusses the question of the ownership of the Pharmacopœia.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 118–120. Also Northwestern Druggist, 1910, v. 11, Jan., pp. 17–18.

An editorial (Drug. Circ. 1910, v. 54, p. 3) calls attention to a number of contributions on the Government ownership of the Pharmacopœia, and points out that a somewhat similar bill was introduced in Congress in 1884 by Representative Randall of Pennsylvania.

See also *Ibid.* pp. 49, 104–105, and Am. Druggist, 1910, v. 56, pp. 16–18; Meyer Bros. Drug. 1910, v. 31, pp. 2, 37; and Southern Pharm. J. 1909–10, v. 2, pp. 262–263.

An editorial (N. York M. J. 1910, v. 91, p. 186), commenting on the Coudrey bill, states that nothing less than a delegate body representing all the physicians and all the pharmacists of the United States can undertake with fairness the revision and publication of standards by which all the more important drugs and preparations are to be judged.

See also editorial.—Med. Rec. 1910, v. 77, p. 112.

The representation of pharmacists on pharmacopœial commissions was liberally discussed at the International Congress of Pharmacy, held at Brussels, September 1–6, 1910.—Drug. Circ. 1910, v. 54, p. 601.

Remington, Joseph P., thinks that the official articles in the Pharmacopœia should be controlled by pharmacists.—Midl. Drug. 1910, v. 44, p. 86.

The Maryland Pharmaceutical Association adopted a resolution favoring the publication of a loose-leaf Pharmacopœia as an alternative to the issuing of the usual book with supplements.—Proc. Maryland Pharm. Ass. 1910, p. 182.

An editorial (Bull. Pharm. 1910, v. 24, p. 93) characterizes Bulletin 58 (Hyg. Lab.) as an excellent specimen of governmental assistance in pharmacopœial work, and adds that it is very gratifying that the Government is willing to cooperate in pharmacopœial revision; it is governmental cooperation and not governmental publication that will yield the best results.

8. THE PHYSICIAN AND THE PHARMACOPŒIA.

Leffmann, Henry, contributes a paper on what physicians can do to improve the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 431. See also Bull. Am. Pharm. Ass. 1910, v. 5, pp. 168–170.

The discussion on the paper by Leffman is reprinted.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 170–172.

Fussell, M. H., discusses some of the preparations of the United States Pharmacopœia from the practitioner's standpoint.—J. Am. M. Ass. 1910, v. 54, p. 433.

Wheatley and Tyrode are reported as sending out about 3,000 pamphlets containing a list of the official articles and asking that the members indicate which they desired to have omitted. The fact that fifty per cent had done as requested shows remarkable interest in this work.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 98.

An editorial (Apothecary, 1910, v. 22, No. 1, p. 13) states that the amount of elimination suggested was a striking feature of a recent canvass, as to changes in the Pharmacopœia, made by the Massachusetts Medical Society, about 50 per cent of the membership replying.

Hunt, Reid, chairman, presents the report of the [A. M. A.] Committee on the United States Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 434.

Wilcox, Reynold Webb, in urging that medical men should make themselves more familiar with the Pharmacopœia, said it was with regret that he had to state that, as a rule, pharmacists are better posted as to pharmacy than physicians were in regard to materia medica, pharmacology and therapeutics.—Boston M. & S. J. 1910, v. 162, p. 401.

Rusby, H. H., thinks the real issue between the physician and the pharmacist in regard to the scope of the Pharmacopœia is the unwillingness of the former to permit the Pharmacopœia to afford those provisions which are absolutely essential to the convenient, successful, and safe performance of the pharmacist's duty, and to the welfare of great numbers of patients of those physicians whose practices in the selection of drugs differ from those of the objecting body.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 440.

Coleman, Warren, recalls that the attendance of physicians at the convention of 1900 was not creditable to the medical profession. He adds that, until recently, he had always thought that the Pharmacopœia was issued by a commission appointed by the Federal Government.—N. York M. J. 1910, v. 91, p. 1332.

An editorial (*Ibid.* p. 1020) states that notwithstanding the effort made to enlist the interest of physicians in the making of the Pharmacopœia, the number of delegates from medical organizations was not so large as that from pharmaceutical bodies. It seems, however, to have been larger than at previous conventions, showing that there has been a growth of interest in the work.

Wilbert, M. I., thinks that the outcome of the U. S. P. Convention held in Washington, May 1910, is not altogether promising from the progressive point of view, the general impression being that the Committee of Revision will favor the inclusion of drugs on the basis of use rather than of usefulness.—Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 34.

The Journal of the American Medical Association (1910, v. 54, p. 1706) notes that while the medical profession was not so well represented at this Convention as it should have been, nevertheless there were more medical men in attendance than at the last Convention. At the same time the medical men on the Revision Committee are in an extreme minority only 3 or 4 practicing physicians being on the list. The Council on Pharmacy and Chemistry is well represented, having 8 of its members on the Committee of Revision.

Remington, Joseph P., asserts that the division of the work equally between physicians and pharmacists as advocated by some medical writers, has not been generally approved and pharmacy was generally in the ascendent at the Convention and in the selection of the Committee of Revision and Board of Trustees. The reasons given are that in spite of propaganda and get-together-meetings, the physician is still indifferent. On the other hand, the Pharmacopœia has become largely a book of standards and the interest of the pharmacist is necessarily overwhelming since the passage of the food and drugs act.—Proc. Minnesota Pharm. Ass. 1910, p. 149.

Jensen, Peder, deplores the fact that more medical men were not accepted as members of the Committee of Revision, and expresses the opinion that the day would come when medical men will have a greater responsibility and a greater claim to the framing of the Pharmacopœia.—Pacific Drug Review, 1910, v. 22, Aug., p. 20. (See also Oct., p. 18.)

Eliel, Leo, asserts that some fault is found because there are not so many medical men on the Committee of Revision as some probably think there should be. This fault is that of the general medical profession. He believes that if the slate had been left to the pharmacists who were there, physicians would have been much better represented so far as numbers are concerned.—Proc. Indiana Pharm. Ass. 1910, p. 26.

An editorial (Bull. Am. Pharm. Ass. 1910, v. 5, p. 131) expresses the belief that physicians are utterly unprepared to take an active part in the revision of the U. S. P. or the N. F.

An editorial (N. A. R. D. Notes, 1910, v. 10, p. 293) asserts that the medical profession is manifesting a most welcome co-operation with the pharmacists in the effort to make our legal standards more definite, more accurate, and withal, more in harmony with present-day demands, and the need for such co-operation is only too apparent.

Hunt, Reid, states that, as chairman of the Committee on the Pharmacopœia of the American Medical Association, he had been able to get into communication with thousands of medical practitioners in various parts of the United States, all of whom were willing to use the best medicines available and were desirous of obtaining authentic information regarding the probable efficiency of drugs.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 642.

Remington, Joseph P., states that the growing interest in the coming revision of the United States Pharmacopœia by the medical profession gives much encouragement to those who have been carrying the burden for years past and who have felt the increasing responsibility of preparing a work, now an acknowledged authority upon which depends, at least in a degree, the health of the nation and millions of capital invested in the manufacture and sale of medicines.—Midl. Drug. 1910, v. 44, p. 86.

An editorial (N. A. R. D. Notes, 1910, v. 10, p. 293) states that the revision of the Pharmacopœia is not so much a matter of who shall dominate the Convention, how words shall be spelled, or what should be left out or inserted, although some of these matters are important, but the primary object should be to give the physician an effective medicinal machine with which to fight disease, and at the same time make the processes such that the pharmacist is able to prepare the remedy economically and in an active form.

Wilbert, M. I., points out that, so far as the physician is concerned, the interpretation put on the instructions regarding scope by the majority of the Committee of Revision will determine whether the Pharmacopœia of the United States is to be developed purely as a legal standard for the many thousands of medicaments used in disease, or whether it shall continue as a basis for medical prescribing and only contain descriptions and formulas for therapeutically useful medicines.—Tr. Am. M. Ass., Sec. Pharm. and Therap., 1910, p. 35.

Loevenhart, A. S., thinks the physicians want the Pharmacopœia to represent the best medical knowledge as to what drugs are useful in the treatment of disease. They would rather let much used drugs which are worthless according to general medical opinion go into the National Formulary.—*Ibid.* p. 40.

Hallberg, C. S. N., thinks that the Pharmacopœia represents the actual state of pharmacy and medicine in this country as nearly as it can be formulated and that pharmacists must cater to the physicians who write prescriptions and use medicine.—*Ibid.* pp. 39–40.

An editorial (N. A. R. D. Notes, 1910, v. 10, p. 608) states that when one analytically considers the real office of the U. S. P., he at once sees that the physician's part in the work is the selection of the remedies, and the pharmacist's part is the preparation of these remedies.

Remington, Joseph P., thinks physicians should have a say in the revision of the U. S. P., but only after thorough study. No Pharmacopœia can be purely a medical work, it must be a book of standards.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 26.

Beringer, George M., expresses the belief that pharmacists want and need the co-operation of the medical profession in the revision of the National Formulary.—Proc. Am. Pharm. Ass. 1910, v. 58. p. 526.

Raubenheimer, Otto, thinks it is the duty of the dispensing pharmacist to instil into the physician respect and confidence for the U. S. P. and N. F. preparations, so that he will prescribe them.—*Ibid.* p. 1091.

Rusby, H. H., is reported as stating that the physician had had little voice in the selection of the U. S. P. contents.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 286.

Kalusowski, H. E., is in favor of having physicians dictate the remedies to be included in the Pharmacopœia and having pharmacists and specialists, thoroughly familiar with the possibilities of the times, revise the book so far as descriptions and standards are concerned.—*Ibid.* p. 89.

Wulling, Frederick J., believes that the medical profession should take a more active part in determining what should go into the U. S. P. The pharmaceutical profession should fix the standards.—Western Druggist, 1910, v. 32, p. 19.

Bruder, O. E., thinks that the physician should dictate or specify the remedy, and that the pharmacist should furnish the best quality of that remedy.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 31.

Remington, Joseph P., is reported as saying that many medical men live in districts where the newest and latest remedies have not reached, and for this reason antiquated and obsolete substances cannot be entirely ignored.—Meyer Bros. Drug. 1910, v. 31, p. 53.

Jensen, Peder, thinks that the physicians as a profession need to keep a very close watch on the work now in formation of the Pharmacopœia, to satisfy themselves that they are not being made the unwilling tools of manufacturing interests.—Pacific Drug Review, 1910, v. 22, Oct., p. 18.

Sollmann, Torald, thinks that the physican of today believes that the Pharmacopœia should be of practical value to him. He has been educated to the evils of nostrum prescribing and turns to the Pharmacopœia for rational medicine, only to find a great number of useless drugs and less useful preparations, many of them merely imitations of the proprietaries against which he has been warned.—Practical Druggist, 1910, v. 27, p. 410.

Remington, Jos. P., states that the Pharmacopœia is not a work which is particularly useful to the physician, because it is intended as a law book and a book of standards, and is not intended in any sense as a work on therapeutics, or as a commentary or text book.—Proc. Texas Pharm. Ass. 1910, p. 121.

Beyer, H. G., thinks that the Pharmacopœia would be useless as a guide, unless its scope and purposes are made of value to both physicians and pharmacists. The revisers of the book should be made cognizant of their responsibility and urged to realize that the Pharmacopœia should be a collection of drugs, medicinal compounds and preparations of recognized therapeutic value and of known strength.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 293.

Thrush, M. Clayton, concludes that it is rarely necessary for a physician to prescribe a drug or preparation that is not recognized in some form or another either in the U. S. P. or the N. F.—*Ibid.* p. 183.

Wiley, Harvey W., thinks that the medical members of the Committee of Revision have a right to object to the introduction into the Pharmacopœia of drugs the therapeutic effect of which is unknown or nil, and to require that the Pharmacopœia should include only those drugs which really have therapeutic value.—*Ibid.* p. 602.

Rusby, H. H., thinks that it is the physician's duty to educate the members of their profession as to the proper articles to employ. They have innumerable text-books for this purpose, and they, and not the Pharmacopœia, constitute the medium that should be employed in that educational work. The Pharmacopœia is in no sense a text-book.—Am. J. Pharm. 1910, v. 82, p. 62.

Hunt, Reid, discussing the relation of the physician to the Pharmacopœia, states that there are certain chemical problems in the solution of which medical opinion should prevail. Thus certain problems in regard to chloroform and ether, and the requirements as to the optical activity of a few drugs, such as scopolamine, are questions which chemists and pharmacists are not competent to decide. Whether the value of the fluid extract or the tinctures of nux vomica should be judged by the percentage of strychnine or by that of the total alkaloids is largely a medical problem.—J. Am. M. Ass. 1910, v. 54, p. 173.

Edsall, D. L., points out that unless marked changes are made in the Pharmacopœia it will remain, as it is now, chiefly a name to the vast majority of the medical profession, and will render no wide service in improving therapeutic practice.—Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 27.

Humiston, Ray, thinks that the general practitioner needs more knowledge about useful and practical drugs, and that should be worked out by therapeutic conferences and clinical observations.—Northwestern Druggist, 1910, v. 11, Feb., p. 18.

Wilbert, M. I., thinks that the Pharmacopœia should be an important factor in advancing rational drug therapy, and thus assist in eliminating the inevitable sequence of the ignorant or uncertain use of drugs which leads to therapeutic nihilism, on the one hand, and hopeless drug addiction or quackery, on the other.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 737.

An editorial (Pharm. Era, 1910, v. 43, p. 450) expresses the belief that the idea that the number of items in the U. S. P. be reduced to 50, or even to 300, is impracticable for a variety of reasons, chief of which is that it would increase the danger of traffic in impure and adulterated drugs, for it would be utterly impossible to persuade or to compel all of the physicians of the country to confine themselves to the use of the limited number of drugs which is contemplated.

Rusby, H. H., thinks that it is desirable that the Pharmacopœia should make a point of indicating in some emphatic manner which drugs and medicines have the approval of the wiser members of the profession.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 440.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 177) expresses the belief that the good work of the American Medical Association, and of the teachers of materia medica and therapeutics in the medical schools, should be preserved and made useful by cooperating in the publication of a commentary on the Pharmacopœia, which will ignore all official substances that are of little or no interest to the practicing physician. Such a commentary can confine its pages to medicines of generally recognized therapeutic value, so that the teacher, the medical student and the practitioner will have the medicines which are endorsed by our present knowledge of therapeutics, separated from the vast accumulation found in even a carefully selected list made from the standpoint of the pharmacist.

The members of the New York Branch of the A. Ph. A. are in favor of having some distinguishing mark or arrangement for the list of selected drugs compiled by the committee on the U. S. P. of the American Medical Association.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 288.

Remington, J. P., pointed out that for many years the Pharmacopœia was a closed book to the medical profession, because members of the latter profession had been led away from it by travelling salesmen in the interest of manufacturing concerns and proprietary remedies. The decay of therapeutics he believes due to this cause, and to the added fact that physicians are not familiar with a sufficient number of U. S. P. preparations. He also pointed out that medical men in different cities used totally different medicines and that because of this evident variation in practice neither a skeleton nor a padded book will be acceptable or useful.—Pharm. J. 1910, v. 31 (85), p. 640.

9. THE PHARMACOPŒIA AS A TEXT BOOK.

The Committee on Materia Medica of the National Confederation of State Medical Examining and Licensing Boards and a similar Committee of the Council on Medical Education of the American Medical Association present a report that is designed to foster a more thorough knowledge of the really important drugs, such as are commonly conceded to be practically indispensable in the general practice of medicine at the present time.—J. Am. M. Ass. 1910, v. 55, pp. 1292, 1302–1303. See also editorial, *Ibid.* p. 1387.

Robinson, William J., commends the action of the National Confederation of State Medical Examining and Licensing Boards and thinks it is better to know 100 drugs well than to know 1000 badly.—*Ibid.* p. 1488.

Haines and Fantus call attention to a list of drugs devised by the Committee on Pharmacology of the Chicago Medical Society, during the winter of 1908, and adopted by the Illinois State Board of Health as a guide in the elaboration of its examination questions. This list contains approximately 120 drugs and preparations.—*Ibid.* p. 1573.

Coleman, Warren, states that an unlimited Pharmacopœia could scarcely be made the basis of text-books on materia medica and therapeutics. He quotes a physician and a pharmacist to the effect that 95 per cent of the prescriptions of this country could be filled without using an unofficial drug if the inclusions of the Pharmacopœia were limited to 500.—N. York M. J. 1910, v. 91, p. 1334.

Bastedo, W. A., asserts that from the point of view of the medical teachers of drugs, a large and comprehensive pharmacopœia is not of necessity a disadvantage, and, by allowing for diversity of opinion, may be an advantage.—*Ibid.* p. 1335.

An editorial (Lancet, 1910, v. 179, p. 1500) argues for a saner relation of the subject of materia medica to the medical curriculum.

An editorial (N. York M. J. 1910, v. 91, p. 1072) states that in the effort to standardize education and examination, the boards of medical examiners have a tendency to assume that, if a drug is recognized in the Pharmacopœia, the medical student must have a knowledge of the drug and its qualities.

Edsall, D. L., in commenting on the teaching of therapeutics in medical schools, points out that the grim shadow which makes teachers dissipate their efforts by devoting time to many things which they are convinced are useless, is the dread of State board of examinations. As things are now students must be prepared for whatever each and every State board may ask. He expresses himself as being gratified to find the Confederation of State Board Examiners ready to appreciate the need of restricting the teaching of therapeutics to critical discussions of a limited number of remedies.—Tr. Am. M. Ass., Sec. Pharm. and Therap., 1910, pp. 25–26.

An editorial (Bull. Pharm. 1910, v. 24, p. 488), commenting on the City of Washington Branch discussion on scope, predicts that the original character of the Pharmacopœia will be maintained, namely, that of a book of formulas and standards for drugs in common use, and not a book of therapeutics which attempts to instruct physicians what they shall and shall not use.

Wilbert, M. I., thinks the several editions of the Pharmacopœia of the United States appear to reflect the decadence of therapeutic instruction and of medical ideals in this country in a way that has as yet not been sufficiently recognized.—Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 32.

An editorial (P. C. P. Alumni Report, 1910, v. 47, p. 105) quotes the New York Medical Journal as asserting that physicians are far more apt to turn to a dispensatory than to either the Pharmacopœia or the National Formulary to revive their memory concerning the remedial and poisonous effects of drugs and their preparations. Dispensatories give practically everything that is contained in the Pharmacopœia, most of what is excellent in the Formulary and much additional information.

Edsall, David L., in a paper on the work of the Council on Pharmacy and Chemistry, states that it is most desirable that there should be a standard work, established by the profession itself, wisely controlled by the profession, guided only by a desire for thoroughness and constant progress, but limited solely to those things that have real importance, and excluding all things that are obsolete or useless for other reasons, whether they are pharmacopœial articles or not.—J. Am. M. Ass. 1910, v. 55, pp. 1701–1705.

Whorton, C., discusses the necessity of a thorough pharmacopœial understanding to the successful practice of pharmacy. He asserts that at least some schools of pharmacy use books containing but few of the U. S. P. formulas for their course of instruction upon the Pharmacopœia, and that students are not required to buy a Pharmacopœia.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1099–1104.

Raubenheimer, Otto, thinks that it is the duty of pharmacists to follow the U. S. P. and N. F. and furthermore it is their duty to suggest improvements, if possible, to the revision committees of these two works.—*Ibid.* p. 1232.

Hudson, T. G., reports that an inspection of the drug stores of Georgia reveals the fact that less than 50 per cent of the druggists of that State have the latest edition of the U. S. P.—Bull. Georgia Dept. Agric. 1910, No. 51, p. 129.

Feild, D. M., states that his "graduates want nothing to prove their proficiency, but a U. S. P., U. S. D., Prof. Remington's P., a kit of good tools, pure fresh material and he will show the fellows from Missouri how easy it is for him to prove equal to many perplexing propositions that confront the busy drug clerk".—Proc. North Carolina Pharm. Ass. 1910, p. 87.

10. U. S. P. CONVENTION REPRESENTATION.

Remington, Joseph P., makes a plea for harmony between physicians and pharmacists in the forthcoming Pharmacopœial Convention.—J. Am. M. Ass. 1910, v. 54, p. 630.

See also in this connection an editorial on "Harmony and Honesty".—*Ibid.* p. 618.

Motter, Murray Galt, submits the text of the proposed amendments to the Constitution of the U. S. P. C.—*Ibid.* p. 630.

The J. Am. M. Ass. (1910, v. 54, p. 1884), commenting on the proposition to reduce the number of delegates from 3 to 1 for each organization, remarks that this matter has two sides: The admission of 3 delegates means that the Convention is representative of the individual delegates rather than of the institutions from which they are accredited; it places the medical institutions at a disadvantage; and it gives a very great advantage to the eastern institutions over those which are situated at a greater distance from Washington. On the other hand, it is argued that the eastern pharmaceutical men actually perform the greatest part of the work of revision; and that the three-delegate plan assured a larger convention. On the whole it appears that the retention of 3 delegates is to be regretted.

Hunt, Reid, points out that the U. S. Pharmacopœial Convention is composed of representatives of the medical and pharmaceutic professions. About two-thirds of those eligible under the present constitution belong to the former and one-third to the latter.—Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 4.

Leffmann, Henry, thinks the medical profession is entitled to at least equal representation on the Committee of Revision and Board of Trustees, by reason of its numerical strength in the nation at large, and by reason of its historical relations to, and the medical significance of the book. He thinks an inspection of the roll of the last Convention will show some phases of representation that can be best compared to what is known in England as the "rotten borough" system.—J. Am. M. Ass. 1910, v. 54, p. 431.

Remington, Joseph P., thinks Leffmann's views are full of inconsistencies. He apprehends that the United States Government will have more and more influence in the formation of the Pharmacopœia, and thinks that what is greatly needed is a greater interest on the part of the American Medical Association.—*Ibid.* p. 432.

Motter, Murray Galt, pointed out that 34, indeed 35 when a vacancy was filled, of the members of the General Committee of Revision were nominees of the pharmaceutical caucus, 16 were nominees of the medical caucus; of the latter number only 2 reached the Executive Committee.—Pharm. J. 1910, v. 31 (85), p. 640.

Mason, H. B., states that one of the things that the National Association wanted with reference to the next Pharmacopœia was a man on the Revision Committee who would be a practical manufacturing chemist and another who would be an expert along the line of pure products. He asserts that G. D. Rosengarten and Albert Plaut and others of the same character will see to it that in the next Pharmacopœia standards are not so ideal.—Proc. Michigan Pharm. Ass. 1910, p. 71.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 77, May 16, p. 7) asserts that the U. S. P. Convention was a large, representative, earnest, diligent body of pharmacists and physicians, with a fair sprinkling of importing and wholesale druggists, and representatives of the medical, chemical and pharmacological branches of the Government. It transacted its business as expeditiously and with as little friction as so large an assemblage of men untrained to working together could be expected to do.

The list of delegates to the U. S. P. C. is reprinted.—Midl. Drug. 1910, v. 44, pp. 29–31. See also Abstr. Proc. U. S. P. C. and in drug journals generally.

Wiley, Harvey W., thinks that one of the most important points in the revision of the Pharmacopœia is to see that the two great interests represented work in complete harmony in the revision which is now taking place.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 601.

Dohme, A. R. L., states that it behooves the pharmacists and physicians of the South to be more active in their interest in the U. S. P. because unless they are, their interests, and the products they are especially interested in, must suffer in the Pharmacopœia.—Proc. North Carolina Pharm. Ass. 1910, p. 75.

Vaudin, L., discussed at the International Congress of Pharmacy, Brussels, the question of pharmaceutical representation on pharmacopœial commissions, especially in connection with the Ph. Fr.—Chem. & Drug. 1910, v. 77, p. 406. See also editorial, p. 483.

"G. G." [Griggi ?] discusses the nomination of a large representation of practicing pharmacists to the commission for the revision of the pharmacopœia.—Boll. chim. farm. 1910, v. 49, pp. 651–653.

See also Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 294.

Ransom, Francis, urges better representation of pharmacists in the revision of the Ph. Brit., and calls attention to evidence of progress in this direction.—Pharm. J. 1910, v. 31 (85), p. 166.

See also *Ibid.* pp. 484, 508, and Chem. & Drug. 1910, v. 77, p. 559.

11. VALUE OF CRITICISMS.

Wiley, Harvey W., thinks that no kind of comment, favorable or unfavorable need be feared, and many faults of omission and commission would be avoided if criticisms could be had before the final publication of the book.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 608.

Lichthardt, G. H. P., points out that much of the criticism of the U. S. P. and the N. F. is the reflection of the individual experience or the ideas of the author regardless of the needs of others or the greatest good of the greatest number.—Pacific Pharmacist, 1909–10, v. 4, p. 86.

An editorial (Critic and Guide, 1910, v. 13, p. 389) points out that while no one likes to be criticized and exposed, criticism and exposure are the greatest instruments of progress of the present day.

Remington, Joseph P., thinks that at the present time constructive criticism is necessary which will aid the Convention to reach a proper understanding of the changes which should be met so that the U. S. P. IX shall be the best authority in the world.—Am. Druggist, 1910, v. 56, p. 134.

Puckner, W. A., thinks that the criticisms made of the revision of the U. S. P. merely show that there is a great deal of inconsistency. In other words, it is not that the Revision Committee did not know any better. Every now and then it creeps out that they did know better, that they applied the proper procedure in each case, and then forgot it; or, rather, one committee, or one member, formulated the proper procedure, and it was not carried out. If one will analyze the criticisms that have been made of the Pharmacopœia, it will be found that nearly fifty per cent of them can be ascribed to lack of proper editorial work.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 973.

Gallagher, J. C., thinks it would have been desirable to have had the criticisms on the Pharmacopœia since the enactment of the food and drugs law published.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 84.

A book review (Pharm. Era, 1910, v. 43, p. 1069) calls attention to the "Digest of Comments on the Pharmacopœia" and points out that the fact that the compilers have given careful consideration to their work is shown by the character of the abstracts and the large number of periodicals and works of reference they have consulted.

The Pharmaceutical Journal (1910, v. 30 (84), p. 510) contains a commendatory review of Bulletin 58, and states that the status of the U. S. P. as the official standard for determining the purity and strength of widely used medicaments could not be maintained on better material than is to be found in this "Digest," for the compilation of which the pharmaceutical and chemical literature of the whole civilized world has been ransacked in a way which, one is almost compelled to think, can only be done in America.

Erculisse, P., comments on the "Digest of Comments" as a work of exceptional importance and commends it to the readers of the Bulletin of the Royal Society of Pharmacy of Brussels.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 288.

Kremers, Edward, presents a book review of the "Digest of Comments on the Pharmacopœia" for 1906 and concludes that if the several departments of the national Government do as well by the next revision of the U. S. P. as the Treasury Department has done thus far, we certainly ought to have a better Pharmacopœia than ever before.—Midl. Drug. 1910, v. 44, p. 81.

An editorial (Pharm. J. 1910, v. 31 (85), p. 547) calls attention in complimentary terms to Bulletin No. 63.

A book review on the "Digest of Comments on the Pharmacopœia of the United States of America (Eighth Decennial Revision) and the National Formulary (Third Edition) for the Calendar Year ending December 31, 1907" states that it is exceedingly gratifying that these volumes are appearing with the rapidity that they are, as the references are more complete and the abstracts more satisfactory than in any other publication available. The favorable comments which have been made in the Am. J. Pharm. regarding the previous Bulletins relating to "Digest of Comments" apply to this volume in hand. The wisdom of the Board of Trustees of the U. S. Pharmacopœial Convention (1900), in effecting the cooperation of the Surgeon-General of the Public Health and Marine-Hospital Service of the United States in this work, is becoming more and more apparent as each volume of "Digests" appears.—Am. J. Pharm. 1910, v. 82, pp. 495–496.

Beal, J. H., in commenting on the work done by the United States Public Health and Marine-Hospital Service in connection with the revision of the U. S. P., points out that the completeness and great value of the "Digest of Comments" as aids to more perfect pharmacopœia revision are so well know that further comment would be altogether superfluous.—Abstr. Proc. U. S. P. C. 1910, p. 22.

12. COMMITTEE OF REVISION.

Raubenheimer, Otto, in a review of the history of the Pharmacopœia of the United States, calls attention to the composition of various committees of revision.—Practical Druggist, 1910, v. 28, pp. 71–72.

Beringer, George M., discusses the need for the practical pharmacist in pharmacopœial revision, and points out that as a legal standard the U. S. P. can no longer remain a doctor's book or a druggist's formulary as originally conceived.—Proc. New Jersey Pharm. Ass. 1910, pp. 58–63.

Vaudin discusses the utility and necessity of a large representation of practical pharmacists on the revision committees in charge of the elaboration of national and international pharmacopœias.—Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 102–106. For discussion and resolutions see pp. 309–312. Also Pharm. Ztg. 1910, v. 55, p. 767.

Melvin, J. Tracy, thinks that the Revision Committee should be chosen by some more deliberate and responsible body than the erratic votes of a hurried convention. Western Druggist, 1910, v. 32, p. 19.

Eccles, R. G., thinks that the work of revision and publication of the U. S. P. should be done by Government pharmacologists if it is to continue a law. If Congress continues to make it a standard, Congress should have all power in directing its production.—*Ibid.* p. 20.

Baumgarten, G., thinks that the medical profession should be well represented rather than largely represented on the Committee of Revision.—*Ibid.* p. 16.

Long, Eli H., thinks that the medical profession should be more largely represented on the Revision Committee.—*Ibid.* p. 18.

Melvin, J. Tracy, does not believe that the medical profession should be more largely represented on the Committee of Revision as their present representation is proportionate with their interest.—*Ibid.* p. 19.

Wiley, H. W., is reported as paying a high tribute to some of the members of the Committee of Revision and saying that if his prayers prevailed these members would find a place on the Committee of Revision for the U. S. P. IX, on the other hand, there are a few who, if his prayers are answered, will not even seek a place on the coming Committee of Revision as they can well be spared.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 88. Also J. Am. M. Ass. 1910, v. 54, p. 397.

Dohme, A. R. L., in discussing the U. S. P. Committee of Revision, points out that of the twenty-five men who served on the former Committee of Revision, eight were not re-elected.—Proc. North Carolina Pharm. Ass. 1910, p. 77.

Hunt, Reid, expresses the belief that physicians and pharmacists should not be expected to furnish standards for custom house officials and patent medicine manufacturers.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 642.

Sollmann, Torald, thinks that it would not be wise to leave final judgment regarding the scope of the Pharmacopœia to the Committee of Revision, as this committee must by the very nature of things consist largely of pharmacists and chemists while the question of admission of drugs belongs to the medical practitioner and pharmacologist.—Practical Druggist, 1910, v. 27, p. 411.

Wilbert, M. I., points out that the Committee of Revision has been made directly responsible for the nature and contents of the U. S. P. IX and the members of the committee will not be in position to shirk criticism should the result of its work not comply with the wishes of the interested owners of the Pharmacopœia.—Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 35.

Remington, Joseph P., thinks that the Committee of Revision should not be bound too strictly in matters of detail by the votes of the Convention.—Abstr. Proc. U. S. P. C. 1910, p. 27.

Kraemer, Henry, in a report of the U. S. P. Convention, points out that the action of the delegates, including their resolutions, showed again and again that they did not desire to exercise any restraining influence on the Committee of Revision, and that whatever the sciences and arts had produced they expected the members to utilize, wherever practicable, in the preparation of a work and standard that is to become the handbook of the physicians and pharmacists in ministering to the needs of the people who are suffering from disease.—Am. J. Pharm. 1910, v. 82, p. 281.

Motter, Murray Galt, discussing the responsibility of the Committee of Revision, declared that if those who are to effect the work of revision do not clearly realize their responsibility to the Convention and to the professions, and produce a book of standards, indeed, but of standards for substances of established value and use, the next Pharmacopœia, instead of being a force, will be a farce.—Pharm. J. 1910, v. 31 (85), p. 640.

Jensen, Peder, points out that the Committee of Revision has really been reduced to fifteen members rather than increased to fifty, as was popularly supposed, and it looks very much as though precautions were taken to eliminate such men as might be *personæ non gratæ* with the moving powers of the revision forces.—Pacific Drug Review, 1910, v. 22, Aug., p. 20.

The election of the members of the Committee of Revision is reported.—Abstr. Proc. U. S. P. C. 1910, pp. 37–38. See also pharmaceutical and drug journals generally.

Wiley, Harvey W., discusses the work of the U. S. P. Committee of Revision and the method of its selection.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 599.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 77, May 16, p. 7) expresses the belief that the preparation of the ninth revision of the U. S. P. is in competent hands and that the book will be issued promptly and like its immediate predecessor be as good as, if not better than, the best of its kind.

The J. Am. M. Ass. (1910, v. 54, p. 1884) notes that, on the General Revision Committee of 50, there are only 3 practitioners and about 6 pharmacologists. The other 41 members are pharmacists or chemists.

An unsigned article (Meyer Bros. Drug. 1910, v. 31, p. 172) points out that the new Committee of Revision contains very few retail druggists who are not otherwise engaged and few practitioners of medicine who have no other interests, but between these two extremes are members with pharmaceutical training and others with medical training who cover the common ground between the exclusive retail pharmacist and the restricted medical practitioner.

Motter, Murray Galt, points out that the professional representation of the General Committee of Revision consists at present of 34 nominees of the pharmaceutical caucus and 16 nominees of the medical caucus and that of the latter number only 2 reached the Executive Committee.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 641.

Walton, L. L., gives the following summary of the pharmaceutical and medical interests that are represented in the General Committee of Revision: colleges of pharmacy 20, medical colleges 9, pharmacists (retail druggists) 6, U. S. Government service 5, manufacturers of pharmaceuticals 5, manufacturing chemists 1, analytical chemists 1, practicing physicians 1, editors pharmacy journals 1, wholesale druggists 1.—Proc. Pennsylvania Pharm. Ass. 1910, p. 42.

An editorial (Western Druggist, 1910, v. 32, p. 283) discussing the U. S. P. Convention, asserts that "The Dutch have captured Holland," and that of the Revision Committee elected at the recent Convention, 40 are pharmacists and 10 are physicians.

Coblentz, Virgil, on going over the personnel of the Revision Committee, finds that there are 12 chemists, 13 physicians, and the balance pharmacists; that is, 25 out of 50 are pharmacists, physicians and chemists constituting the balance. So there is no doubt at all that the pharmacists will practically have their own way.—Proc. Maine Pharm. Ass. 1910, p. 41.

Diehl, C. Lewis, thinks that inasmuch as the representatives of the medical organizations were in the majority, the selection of officers and of the Revision Committee must be accepted as being the deliberate vote of the medical profession, as it was clearly within the power of the medical delegates on the nominating committee to secure a much larger contingent of physicians on the Revision Committee had they so desired.—Proc. Kentucky Pharm. Ass. 1910, p. 57.

Wilbert, M. I., thinks it unfortunate that the general medical practitioner and the teachers of clinical medicine and applied therapeutics in medical schools are not more liberally represented on the General Committee of Revision, though on the other hand it is a matter of congratulation to note that the new thought in pharmacal therapy, as represented by experimental pharmacology, is well represented; no less than 6 members of the General Committee of Revision being directly interested in this line of work.—Am. J. Pharm. 1910, v. 82, p. 257.

Eliel, Leo, thinks the new Committee of Revision represents every branch of medicine, every branch of pharmacy, and is a very good, active committee, and one which will certainly do good work.—Proc. Indiana Pharm. Ass. 1910, p. 26.

Wiley, H. W., suggests that the several interests represented in the revision of the Pharmacopœia should restrict themselves to work in their particular lines.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 639. Also Pharm. J. 1910, v. 31 (85), p. 640.

The names of the members of the sub-committees of the U. S. P. Revision Committee are presented.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 658–660. Also Am. Druggist, 1910, v. 57, p. 191; Bull. Pharm. 1910, v. 24, p. 443; N. A. R. D. Notes, 1910–11, v. 11, p. 91, and other drug journals.

An editorial (D.-A. Apoth. Ztg. 1910–11, v. 31, p. 118) comments on the nationality of members of the Executive Committee of Revision.

Dohme, A. R. L., thinks that the present Committee of Revision is an excellent one and well supplied with young, active, energetic and well posted men.—Proc. North Carolina Pharm. Ass. 1910, p. 84.

Jensen, Peder, thinks that the selection of an Executive Committee of fifteen looks very much as if precautions were successfully taken to eliminate such men as might be considered objectionable by the moving powers of the revision forces.—Pacific Drug Review, 1910, v. 22, Oct., p. 18.

Wiley, H. W., thinks that the responsibility resting on the revisers of the U. S. P. and of the N. F. is much greater than ever before, and points out that all available information bearing on their improvement should be secured.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 15.

An editorial (Nat. Druggist, 1910, v. 40, p. 257) expresses the belief that the Committee of Revision is the best that has ever been selected for this important work. It represents every branch of the pharmaceutical and medical professions and we may confidently expect to receive a new Pharmacopœia that will embody all of the excellencies of the old and none of its defects.

Puckner, W. A., hopes that the members of the Committee of Revision will take the criticisms of the U. S. P. VIII to heart and bear in mind that consistency is one of the chief things that should be considered.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 973.

Murray, B. L., thinks it would be a good idea to have one member of the Committee of Revision to do the editing, and the others assist in the formation of the new Pharmacopœia. The present book certainly shows a lack of editing, cross references and all such things are very unsatisfactory.—*Ibid.* p. 974.

Lyons, A. B., thinks the inconsistencies in the U. S. P. VIII are due to the fact that a committee of 25 endeavored to edit one work.—*Ibid.* p. 974.

13. NATURE AND PROGRESS OF REVISION.

Remington, Joseph P., discusses the Pharmacopœia and its revision, and calls attention to some of the changes necessary in the method of revising the book.—Am. Druggist, 1910, v. 56, pp. 133–134. See also Northwestern Druggist, 1910, v. 11, April, pp. 29–31.

Wetterstroem, Theo. D., reviews some of the history of the Pharmacopœia of the United States and calls attention to the methods of revising the book.—Midl. Drug. 1910, v. 44, p. 231.

Kremers, Edward, discusses some problems in pharmacopœial revision and states that, if he could put into practice his ideas of revision, the revision of the U. S. Pharmacopœia would go on incessantly so that errors might be eliminated as soon as discovered. Defective processes should be discarded, though not replaced immediately by others.—*Ibid.* pp. 1–2.

Forbes, J. Winchell, discusses the method of revising the U. S. P.—*Ibid.* p. 115.

The discussion on the revision of the Pharmacopœia by the Medico-pharmaceutical Section of the Cleveland Academy of Medicine is reported.—Practical Druggist, 1910, v. 27, pp. 410–411.

Wiley, H. W., outlines his opinions on and his proposed policy regarding the methods to be followed in the revision of the U. S. P.—Pharm. Era, 1910, v. 43, pp. 1179–1180.

Remington, Joseph P., reports on the progress of the pharmacopœial revision up to the present time.—Am. Druggist, 1910, v. 57, p. 301. Also Bull. Am. Pharm. Ass. 1910, v. 5, pp. 608–609.

Wiley, Harvey W., thinks that every person who is actively engaged in the preparation of this work should realize the greatness of the task and the sacredness of the obligation. It is a work above all others in which the conscience should figure and in which all considerations other than that relating to the purity of the drug and the efficiency of its description should be laid aside.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 608.

Rusby, H. H., discusses the basic principles of pharmacopœial revision.—Southern Pharm. J. 1909–10, v. 2, p. 310.

Weinstein, Abraham, thinks that simplicity and improvement should be the guide of the Revision Committee in the future.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1279.

A number of individual opinions regarding the revision of the U. S. P. and who is to do the work of revising is presented.—Western Druggist, 1910, v. 32, pp. 16–21.

Whelpley, Henry M., thinks that pharmacists and physicians can unite to make the U. S. P. IX the useful Phamacopœia that will result from proper cooperation.—*Ibid.* p. 17.

Remington, Joseph P., states that the ninth revision of the U. S. P. will be conducted under vastly different conditions from those that obtained at any time in the history of the United States.—Midl. Drug. 1910, v. 44, p. 87.

Jensen, Peder, thinks that three great influences will be felt in the framing of the Pharmacopœia. First, the manufacturing interests, second, the school interests, and third, the medical interests. He commends the medical interests as legitimate, but states that the school influence was not always for the best, being marred to some extent by the too-willing compliance of some of these men with the demands of the manufacturing influences.—Pacific Drug Review, 1910, v. 22, Aug., p. 20. (See also Oct., p. 18.)

Kremers, Edward, discusses the revision of pharmacopœias, and points out that in the case of our own U. S. P. the result has been a rather queer compromise. There has been a demand to place all complex medicaments in the National Formulary, yet a compromise was effected in placing certain of them in the Pharmacopœia.—Midl. Drug. 1910, v. 43, pp. 669–670.

Ranson, Francis, discusses the relation of the pharmacist to the pharmacopœia and the desirability of having pharmacists more largely represented on the commissions or committees entrusted with the revision of the national pharmacopœia.—Year-Book of Pharmacy, 1910, p. 322.

Linke, discusses the occasional occurrence of errors in pharmacopœias and the reasons for their inclusion.—Apoth. Ztg. 1910, v. 25, pp. 248–250.

Koch, William J., presents a number of suggestions for the perfection of U. S. P. and N. F. formulas.—Am. Druggist, 1910, v. 56, p. 239.

Thome, E. R., presents a number of suggestions for the U. S. P. ninth revision.—Practical Druggist, 1910, v. 28, pp. 122–123.

Breves, Rudolph, presents a number of suggestions for the new Pharmacopœia.—*Ibid.* pp. 38–39.

2. SCOPE.

1. NATURE AND CONTENT OF THE PHARMACOPŒIA.

Jacobi, A., considers the U. S. P. VIII by far inferior to the U. S. P. VII. He asserts that a number of quack preparations have been included and it is today by no means the correct and safe guide that it was considered formerly.—J. Am. M. Ass. 1910, v. 54, p. 513.

Kraemer, Henry, points out that the U. S. P. VIII is not abreast of the advances made in pharmacognosy and that it is in fact distinctly behind the Ph. Germ. IV which was published 5 years previously.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 85.

Puckner, W. A., expresses the opinion that many of the shortcomings of the U. S. P. VIII are due to lack of proper editorial work, that is of allowing things to creep in here and there, which a proper review of the whole book would have prevented.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 973.

Humiston, Ray, expresses the hope that the future Pharmacopœia may be simplified and that the waste matter that has been a bugbear will be relegated to a historical volume for reference, rather than for study.—Northwestern Druggist, 1910, v. 11, Feb., p. 18.

Wiley, H. W., states that the coming revision of the U. S. P. to be generally acceptable must be conducted on a distinctly higher plane and must embody a broader view of the whole general subject, greater skill of the individuals who are responsible for the revision, and a greater appreciation of the public welfare.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 88.

Anderson, Wm. C., discusses the nature and content of the U. S. P. and the N. F.—Practical Druggist, 1910, v. 28, pp. 75–77. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 21.

Rusby, H. H., discusses some of the basic principles of pharmacopœial revision.—Am. J. Pharm. 1910, v. 82, pp. 61–62. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 440.

Haskin, Frederic J., discusses the nature of the Pharmacopœia of the United States and comments on the object of the revision.—Pacific Drug Review, Mar. 1910, v. 22, p. 14.

Remington, Joseph P., states that some of the members of the Committee of Revision are strongly advocating what has been termed a ''skeleton,'' on the other hand some favor what has been termed by the opposing side as a ''padded'' Pharmacopœia. The real sentiment of the Committee of Revision is for a Pharmacopœia which will satisfy the majority of those who use the book and what has been termed a ''sane'' book, representing neither of the extremes mentioned above.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 609. See also p. 640.

Wilbert, M. I., presents a forecast of the U. S. P. IX.—Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, pp. 29–39. Also J. Am. M. Ass. 1910, v. 55, pp. 1367–1370.

Edsall, D. L., states that revision may make the Pharmacopœia better or make it even worse, so far as its usefulness to students and practitioners is concerned, according as it is intended to make it purely a reference book or a practical working book, in other words whether it is revised upward or downward.—Tr. Am. M. Ass. Sec. Pharm. and Therap. 1910, p. 27.

An editorial (N. York M. J. 1910, v. 91, p. 917) expresses the opinion that a work divided into two parts, one intended primarily for the instruction of medical men, the other to embrace all that large number of drugs used in domestic medicine and but seldom prescribed by physicians, would meet the demands of teachers of therapeutics and of the officers interested in the execution of the food and drugs law.

Powell, William C., advises publishing the Pharmacopœia of the United States in the form of a loose-leaf book which would be more practical to the man who uses the Pharmacopœia and would permit of the various supplements being inserted in the place where corrections are to be made.—Proc. Maryland Pharm. Ass. 1910, p. 180.

The members of the City of Washington Branch believe that the Pharmacopœia should be a compilation of acceptable standards for desirable medicaments of known and recognized value.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 292. See also pp. 144–148.

Flemer, Lewis, thinks the U. S. P. should be strictly a book of standards and should contain all of the drugs and chemicals used in medicine, and such fundamental preparations as extracts, fluid extracts and possibly tinctures.—*Ibid.* p. 14.

Rusby, H. H., thinks that the U. S. P. should include all drugs that are used to any considerable extent.—*Ibid.* p. 82. See also Southern Pharm. J. 1909–10, v. 2, p. 310.

Hatcher, R. A., thinks that a Pharmacopœia containing a selected list of medicaments of the highest standard of excellence would be an opportunity for pharmacists to hold the medical profession in line with the propaganda for the prescribing of official drugs.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 286.

Jeancard and Satie state that in most European countries the function of pharmacopœias is to consider only products as utilized in pharmacy. This restriction is quite consistent with the etymology of the word. In the United States, on the other hand, the Pharmacopœia has the authority of a legal standard not only for products which are intended for pharmaceutical use but for table consumption as well.—Pharm. Era, 1910, v. 43, p. 141. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 94.

Flowers, Hiland, thinks that unless the needs of the Government are carefully considered by the Revision Committee the federal authorities will substitute standards and tests of their own.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 84.

An editorial (Pharm. Era, 1910, v. 43, p. 449) makes the plea for preserving the integrity of the U. S. P. and the providing of standards for all medicinal substances used in any section of the country by physicians and pharmacists.

MacDowell, W. F., thinks that as the Federal Government would be benefited as much as the pharmacists by a properly revised Pharmacopœia, Congress should appropriate a fund sufficient for the thorough revision.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 84.

Beringer, George M., expresses the belief that the Pharmacopœia must be broadened to serve its added functions as the guide and standard for the manufacturer, importer, wholesaler and retailer.—Proc. New Jersey Pharm. Ass. 1910, p. 59.

Hunt, Reid, asserts that, in the present rapid evolution of the Pharmacopœia as a commercial standard, there is danger that the very purpose for which the work was founded and for which it exists will be obscured. The medical profession will probably, sooner or later, insist that only those articles extensively used in the treatment or prevention of disease and the solvents, reagents, or other chemicals absolutely necessary for their preparation or testing, be admitted.—J. Am. M. Ass. 1910, v. 54, p. 173. See also Bull. Am. Pharm. Ass. 1910, v. 5, p. 88.

Coblentz, Virgil, thinks that one section of this vast country cannot dictate to the other what it can and cannot have standardized. Standards are absolutely necessary if the apothecary is expected to guarantee the quality of his drugs and galenicals.—Proc. Maine Pharm. Ass. 1910, p. 43.

Wilbert, M. I., makes some suggestions regarding the possible improvement of the Pharmacopœia of the United States.—Midl. Drug. 1910, v. 43, pp. 682–685.

Francis, J. M., notes the gradual elimination of manufacturing processes from the U. S. P., and prophesies that in the 9th revision such eliminations will be carried still further and this book will become in the truest sense of the term a book of legal standards, a volume given to a concise description of the various substances to enable physicians and pharmacists to ascertain the exact quality of the particular substance which may be under consideration.—Proc. Michigan Pharm. Ass. 1910, p. 44.

Beal, James H., thinks there should be a formula in the Pharmacopœia for everything the druggist can make efficiently and economically.—Proc. Missouri Pharm. Ass. 1910, p. 29.

Morgan, F. P., thinks it is evident, from the standpoint of the efficacy of the food and drugs act, that the larger the number of drugs described in the next Pharmacopœia the better, provided that the drugs are properly standardized. This proviso is of great importance, because the presence in the Pharmacopœia of drugs without standards, or with inadequate standards, is of little or no advantage so far as facilitating the execution of the law is concerned.—J. Am. M. Ass. 1910, v. 54, p. 1812.

Beringer, George M., thinks that use and use alone should decide the admission of any article, and entire disuse the dismissal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 769.

Solis-Cohen, Solomon, discusses the scope of the Pharmacopœia and the question as to where the Pharmacopœia should draw the line of demarcation.—P. C. P. Alumni Report, 1910, v. 47, pp. 171–176. Also N. York M. J. 1910, v. 91, p. 960.

Sollmann, Torald, expresses the belief that at least half of the articles in the present Pharmacopœia could be thrown out as useless.—Practical Druggist, 1910, v. 27, p. 411.

Wilbert, M. I., points out that the paragraph of the general principles relating to the scope of the Pharmacopœia, as finally adopted, provides that the Committee of Revision be authorized to admit into the Pharmacopœia any medicinal substance of known origin.—Tr. Am. M. Ass., Sec. Pharm. and Therap., 1910, p. 34.

See also comment by Schamelhout, A.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 304.

Kraemer, Henry, thinks that pharmacists should have a hand in saying what substance should be included in the Pharmacopœia and what deleted from it, and that it should not be left entirely in the hands of the medical profession.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 795.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 177) states that it is quite evident that the U. S. P. IX will contain more remedies than are found in the U. S. P. VIII.

Fussell, M. H., discusses some of the preparations of the United States Pharmacopœia from the practitioner's standpoint.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 175–178.

Thrush, M. Clayton, discusses the U. S. Pharmacopœia and the National Formulary and asserts that they contain a sufficient armamentarium for the medicinal treatment of disease.—J. Am. M. Ass. 1910, v. 54, p. 435. Also Bull. Am. Pharm. Ass. 1910, v. 5, pp. 178–183.

Hunt, Reid, as Chairman of the Committee on the U. S. P., outlines the methods adopted in securing information and presents a number of suggestions and recommendations on the scope of the U. S. P.—Tr. Am. M. Ass., Sec. Pharm. and Therap., 1910, pp. 4–5. Also Bull. Am. Pharm. Ass. 1910, v. 5, pp. 172–174. For discussion see pp. 184–191.

Hatcher, R. A., states that physicians by silence do give tacit assent to the programme on scope as outlined, and while he does not believe that their protest would be of much influence, he nevertheless thinks it would have considerable value.—Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 41.

Benedict, A. L., thinks that every substance of demonstrated value or common use should be included in each revision list of the Pharmacopœia.—Western Druggist, 1910, v. 32, p. 17.

Wiley, Harvey W., thinks there can be no just reason for including in the Pharmacopœia a remedy the therapeutic value of which is zero, or at least an uncertain quantity.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 602.

Remington, Joseph P., states that the medical profession are interested vitally in the selected list of drugs and preparations which form the articles which should become official.—Midl. Drug. 1910, v. 44, p. 86. Also Am. Druggist, 1910, v. 56, p. 133.

Nelson, Burt E., thinks that obsolete and inert material should be eliminated from the Pharmacopœia in the next revision, so that the book will really be, as it should be, an authoritative list of substances useful to and used by physicians in the treatment of disease.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 294.

Murray, B. L., thinks it a waste of space to devote long monographs to the description of crude materials used almost entirely in the arts and seldom, if ever, used in their natural condition as medicaments.—Am. Druggist, 1910, v. 57, p. 384.

Solis-Cohen, Solomon, states that it is obviously unwise to waste the time and energy of the Committee of Revision in elaborating standards for preparations intrinsically worthless or in very little demand, but the difficulty lies in determining what establishes the value or worthlessness of a remedy and what is the measure of this demand.—P. C. P. Alumni Report, 1910, v. 47, p. 172. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 489.

The J. Am. M. Ass. (1910, v. 54, p. 1885) remarks that if the admissions to the future Pharmacopœia are not to be based on scientific standards, if the wishes of the profession are not to be recognized in its revision, then the book will not be regarded by intelligent physicians as a safe guide to scientific prescribing.

An editorial (Therap. Gaz. 1910, v. 34, pp. 472–474) discusses the sufficiency of 20 remedies and calls attention to a contribution in the Boston Medical and Surgical Journal of March 24, 1910.

Remington, Joseph P., is reported as saying that there should be but one thought in Pharmacopœial work and that was that "the best and always the best" must be found therein.—Am. J. Pharm. 1910, v. 82, p. 281.

Davis, N. S., insists that only useful and efficient drugs should be admitted. He would like to see included as well an epitome of the pharmacological action. He thinks that for the good of the physician as well as the patient all compounds should be omitted.—J. Am. M. Ass. 1910, v. 54, p. 1812.

Long, Eli H., thinks that the U. S. P. VIII contains too many drugs of little or no value, and a number that are obsolete.—Western Druggist, 1910, v. 32, p. 18.

Stanislaus, I. V. S., endorses the proposition to delete useless duplications from the Pharmacopœia.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 641.

Wilbert, M. I., presents the following table showing the number of drugs and galenical preparations in the various editions of the U. S. P.:

	1820	1830	1840	1850	1860	1870	1880	1890	1900
Vegetable	254	260	281	297	312	321	264	255	220
Chemical	109	116	124	140	176	192	233	239	268
Animal	12	15	17	19	18	18	15	18	21
Galenical	246	229	266	312	367	440	481	473	443
General Formulæ							4	5	6
Total	621	620	688	768	873	971	997	990	958

—J. Am. M. Ass. 1910, v. 55, p. 1368. Also Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 31.

Snow, C. M., in a summary from a tabulation of 100,000 prescriptions reports that nux vomica preparations lead in the number of times prescribed, closely followed by the digestive ferments and their numerous preparations. These two groups each were prescribed once in every sixteen prescriptions. Quinine, calomel and sodium bicarbonate, bismuth and the salicylates followed in the order named. Caffeine was largely in evidence, while codeine and its salts were prescribed nearly three times as often as morphine and its salts.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 232. Also Am. Druggist, 1910, v. 56, p. 184.

Loevenhart, A. S., points out that the Committee of Revision can readily determine by the general trend of medical literature the articles that are of recognized therapeutic value.—Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 41. See also p. 35.

Osborne, Oliver T., contributes a number of suggestions for the Pharmacopœia of 1910.—J. Am. M. Ass. 1910, v. 54, pp. 50, 132, 208, 290, 376, 1500. See also Bull. Am. Pharm. Ass. 1910, v. 5, pp. 235–236.

The American Therapeutic Society discussion on the U. S. P. is reported in Med. Rec. 1910, v. 78, pp. 169–172.

An editorial (N. York M. J. 1910, v. 91, p. 1020) states that the Pharmacopœial Convention took the ground that the extent to which a drug was used was a safer criterion of its availability for introduction into the Pharmacopœia than the expression of expert opinion regarding its therapeutic value. Consequently the use rather than the therapeutic value of a drug will be taken as a guide by the committee regarding admissions and deletions. See also an editorial.—*Ibid.* p. 1072.

Hynson, H. P., asserts that we have reached a higher stage in pharmacology than that statistics should control the contents of the Pharmacopœia. He thinks that anything admitted should have real pharmacodynamic, as distinct from therapeutic, value.—J. Am. M. Ass. 1910, v. 54, p. 440.

Hunt, Reid, believes that the Pharmacopœia should be limited to the best and most widely used drugs in medical practice, leaving it to others than the members of the Pharmacopœial Convention to establish standards for articles primarily of commercial rather than of medical interest.—*Ibid.* p. 397.

Franz Fritzsche & Co. agree that the most important considerations to be kept in mind in framing the monographs of the Pharmacopœia should be to obtain the maximum of therapeutic value. The Pharmacopœia should not be burdened superfluously, and should not mention articles of no value for therapeutical purposes.—Chem. & Drug. 1910, v. 76, p. 372.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 177) states that the proposition to limit the Pharmacopœia to a book of standards for standard medicines is excellent in theory, but the medical profession itself and the vast army of self-styled doctors has not reached the stage of development where the plan is feasible.

The American Pharmaceutical Association approves the recommendation that: "The Pharmacopœia shall be a book of standards for such substances as are sufficiently used as remedial agents to warrant recognition and the fixing of proper standards."—Proc. Am. Pharm. Ass. 1910, v. 58, p. 535.

Jensen, Peder, does not believe that it is incumbent on the pharmaceutical profession to dictate to the medical profession what medicines or medicinal agents should be used in the treatment of diseases.—Pacific Drug Review, 1910, v. 22, Aug., p. 20. (See also Oct., p. 18.)

Wood, H. C., Jr., maintains that if the physician wishes to use a product whether the rest of the profession regard it as inert or not he should be at least assured that he is getting what he thought he ordered. He believes that every drug used in medicine, whether of value or not, should be in the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 438.

Sollman, Torald, deprecates surrendering ideals to popularity and insists that high standards for admission of drugs should prevail, the principle of selection being scientific judgment rather than ephemeral popularity.—Practical Druggist, 1910, v. 27, p. 411.

Wiley, Harvey W., states that while it is true that the Pharmacopœia is no place to speak of the therapeutic effect of drugs, nevertheless a drug only finds a place in the Pharmacopœia because of its therapeutic effects which must be well understood although they may not be set forth in the Pharmacopœia.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 602.

Tyrode, M. V., reports that the opinions gathered from physicians in Massachusetts show a wide variation regarding admissions to and deletions from the Pharmacopœia.—*Ibid.* p. 150.

A report of the symposium held by the City of Washington Branch on the prospective U. S. P. is presented, with a reprint of the remarks made by Wiley, Remington and Motter.—Practical Druggist, 1910, v. 28, pp. 146–150.

Hunt, Reid, points out that the opinions held regarding the scope of the Pharmacopœia are diametrically opposed and so totally different that it would be practically impossible to agree on a compromise and any attempt to do so would be considered a straddle that would be acceptable to but few.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 642.

Kraemer, Henry, in a report of the U. S. P. Convention of 1910, points out that while there may be some question as to the limit and scope of the U. S. P. it is quite certain that the principle of general use of an article will not be the sole criterion for its admission.—Am. J. Pharm. 1910, v. 82, p. 267.

Wilbert, M. I., thinks that in matters pharmacopœial we have once more come to the parting of the ways, and that the General Committee of Revision must decide whether the U. S. P. IX is to reflect the bright light of the morrow or the dim after-glow of the waning day.—*Ibid.* p. 257.

Hilton, S. L., thinks that physicians should indicate the articles that are to be included in the U. S. P. and to a lesser degree perhaps they should also indicate the formulas or at least the class of formulas they desire to have incorporated in the National Formulary.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 15.

Wiley, H. W., thinks that the revision of the U. S. P. and of the N. F. should go hand in hand and if not practical to have the revision conducted by the same committee, the two committees should at least be closely in touch with each other.—*Ibid.* p. 15.

Solis-Cohen, Solomon, thinks that with a few notable exceptions even nonproprietary mixtures are, and should be, excluded from the Pharmacopœia. Their place is the National Formulary.—P. C. P. Alumni Report, 1910, v. 47, p. 172.

A resolution favoring the elimination from the U. S. P. IX of all formulas for compound preparations as presented to the Baltimore Branch of the A. Ph. A. is reprinted.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 17.

An editorial (J. Am. M. Ass. 1910, v. 54, p. 974) criticises the polypharmacy of the Pharmacopœia and N. F.

An editorial (Pharm. Era, 1910, v. 43, p. 450) proposes accepting the suggestions of the representatives of the A. M. A. regarding the scope of the Pharmacopœia by printing a supplement containing their recommendations with references to the main body of the volume and there giving the items in regular order, with the note "Approved by the A. M. A." In this way medical practitioners desiring to confine themselves to the set list of remedies of the A. M. A. could do so, while the U. S. P. standards in all other respects would be preserved in an official way.

The joint committee on materia medica of the National State Medical Examining and Licensing Boards and of the Council on Medical Education of the American Medical Association submit a list of drugs to which it is recommended State board examinations should be largely restricted.—J. Am. M. Ass. 1910, v. 55, p. 1302.

Haines and Fantus present a list of drugs for State board examinations devised by the Committe on Pharmacology of the Chicago Medical Society in the winter of 1908 and since adopted by the Illinois State Board of Health to serve as a guide in the elaboration of its examination questions in materia medica and therapeutics.—*Ibid.* p. 1573.

An editorial (N. A. R. D. Notes, 1910–11, v. 11, p. 504), in discussing the revision of the Pharmacopœia, points out that before any relief can be had, the rank and file of intelligent American pharmacists will have to rise up in all their strength and demand a revision of the Pharmacopœia for the pharmacists of this country, and not for the private interests.

Wilbert, M. I., discusses the influence of Washingtonians on the revision of the U. S. P.—Pharm. Era, 1910, v. 43, pp. 784–785.

He also calls attention to the career of Daniel B. Smith, a pioneer in the development of the U. S. P.—Am. Druggist, 1910, v. 56, pp. 232–233.

2. NOMENCLATURE.

Oldberg, Oscar, discusses the so-called "Latin Titles" found in the Pharmacopœias and comments on the possibility of developing an international agreement relating to official nomenclature.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 756–762. Also Midl. Drug. 1910, v. 44, pp. 347-350.

Hallberg, C. S. N., discusses the nomenclature of the U. S. P. and points out that it should have the following attributes in order of their importance, (1) descriptiveness, (2) definiteness, (3) flexibility, (4) brevity, (5) euphony.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 549–552. Also Proc. Am. Pharm. Ass. 1910, v. 58, pp. 762–767.

An editorial (Critic and Guide, 1910, v. 13, p. 150) discusses the importance of using official names in prescribing active medicines.

Raubenheimer, Otto, points out that foreign pharmacopœial nomenclature differs largely from our own and that this is well worth remembering in compounding foreign prescriptions.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1138. See also p. 766.

Gane, E. H., states that the Latin titles of botanicals and galenicals are rather more accurate in the Ph. Brit. while the U. S. P. is more up to date in the use of chemical terms.—*Ibid.* p. 1161.

An abstract (Tschirch's Handbuch der Pharmacognosie) discusses the derivation of a number of drug names.—Am. Druggist, 1910, v. 57, p. 104. Also Drug Topics, 1910, v. 25, p. 249.

Jeancard and Satie point out that the pharmacopœias seem to consider as an incontestable utility the giving of Latin names to the essential oils and their principal constituents. This use of Latin, now somewhat comical, was formerly considered a mark of great erudition, which is, however, not the modern notion.—Am. Perf. 1910–11, v. 5, p. 140.

Breves, Rudolph, thinks that the nomenclature is one of the weakest points of the U. S. P. and is not in conformity with modern views on Latin, being copied after English titles and a mixture of almost anything but Latin.—Practical Druggist, 1910, v. 28, p. 38.

The members of the New York Branch of the A. Ph. A. recommend that further efforts be made to establish and adopt international nomenclature and standards for drugs and preparations.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 288.

Wilbert, M. I., thinks it unfortunate that the requirements of the Brussels Protocol in regard to the nomenclature of the official substances were not followed, for it is generally acknowledged that multiplicity of names or multiplicity of applications for the same name must lead to confusion, and confusion is and ever has been a bar to progress.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1144-1145.

Beringer, George M., thinks that the criticism that has been made of the U. S. P. because of its failure to adopt the so-called international nomenclature is unwarranted as it does not appear that the congress was clothed with authority to dictate pharmacopœial titles and the names used in the Protocol were simply "proposed" and not mandatory, and were in each case accompanied by one or more alternatives.—*Ibid.* p. 773. See also Bull. Am. Pharm. Ass. 1910, v. 5, p. 220.

Bartlett, H. H., thinks that the science of pharmacy and all that pertains thereto should be made universal and that above all it would appear desirable to conform to wide spread practices in connection with nomenclature.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 86. Also J. Am. M. Ass. 1910, v. 54, p. 396.

Remington, Joseph P., expresses himself as being unalterably opposed to the indiscriminate changing of Latin titles. He believes that the Committee of Revision should be extremely conservative in the matter of nomenclature changes, if for no other reason than the millions of dollars worth of labels that would be involved.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 87. Also J. Am. M. Ass. 1910, v. 54, p. 396.

Kebler, L. F., after giving the subject of pharmaceutical nomenclature considerable attention has found from experience that it was quite satisfactory.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 766.

Motter, M. G., calls attention to the variations in the titles chosen by the several pharmacopœias for quinine hydrochloride.—J. Am. M. Ass. 1910, v. 54, p. 438.

Wilbert, M. I., in discussing the desirability of developing international uniformity in nomenclature and strength of widely used medicines, calls attention to the official titles of cocaine hydrochloride, solution of potassium arsenite and fluid extract of ergot found in the pharmacopœias used in North and South America.—Am. J. Pharm. 1910, v. 82, pp. 313–314.

For comments on the International Congress of Pharmacy see Am. J. Pharm. 1910, v. 82, p. 569.

Hunt, Reid, says that the larger number of recently introduced drugs present no inherent difficulties, for the proprietorship applies only to the name. The articles themselves are free and the chief problem is one of nomenclature. Different pharmacopœias have pursued different policies in regard to this. Most of them have adopted the name under which the drug has become known in medical literature, provided the name has become free; otherwise they have as a rule adopted the true chemical name.—J. Am. M. Ass. 1910, v. 54, p. 174.

Gehe & Co. (Handels-Bericht, 1910, p. 44), in a review of the Ph. Ital. III, point out that this Pharmacopœia has included many of the former trade names of new remedies as official titles while in connection with others, such as hexamethylenetetramine, the trade name, urotropin, is included as a synonym.

An unsigned article (Chem. & Drug. 1910, v. 77, p. 687) states with reference to the Ph. Russ. VI that the Latin nomenclature of the titles is practically the same as adopted in Germany, Austria and Switzerland; magnesium, however, is rendered by the somewhat peculiar modification "Magnium". In this connection it is interesting to note that Magnium sulfuricum has as a Russian official synonym, "English salt".

"St. G.", in a review of the Russian Pharmacopœia, points out that the nomenclature of that book with few notable exceptions is identical with the nomenclature of the pharmacopœias published in Germany, Austria and Switzerland.—Pharm. Ztg. 1910, v. 55, p. 893.

"R." presents a number of suggestions for the simplification of the official Ph. Germ. nomenclature.—*Ibid.* p. 264.

Anselmino, O., states that excepting 9 titles, which obviously required some change, all of the titles of official medicaments used in the Ph. Germ. IV have been continued in the Ph. Germ. V.—Ber. pharm. Gesellsch. 1910, v. 20, p. 543.

Prescher, J., discusses the nomenclature of the Ph. Germ. V for halogen salts and suggests the use of the "id" ending rather than the "atum" ending, as the latter may be mistaken for the "ate" salts.—Pharm. Zentralh. 1910, v. 51, p. 288.

Hoffmann, M. K., discusses the formulating of a rational nomenclature for inorganic combinations.—Chem. Ztg. 1910, v. 34, pp. 73–76.

An unsigned review (Pharm. Ztg. 1910, v. 55, p. 1003) of the Ph. Germ. V calls attention to some of the changes in nomenclature, and discusses the nomenclature of the newer remedies.

Wilbert, M. I., points out that the following titles for the corresponding trade names well illustrate the difficulties that confront the prospective user of the Ph. Germ. V:

Paraminobenzoyldiæthylaminoæthanolum hydrochloricum,	Novocaine
Benzoylæthyldimethylaminopropanolum hydrochloricum	Stovaine
Tropacocainum hydrochloricum	Tropacocaine
Trimethylbenzoxypiperidinum hydrochloricum	B. Eucaine
Æthylmorphinum hydrochloricum	Dionin
Diacetylmorphinum hydrochloricum	Heroin
Acidum acetylo-salicylicum	Aspirin
Pyrazolonum phenyldimethylicum salicylicum	Salipyrine
Pyrazolonum dimethylaminophenyldimethylicum	Pyramidon
Natrium Arsanilicum	Atoxyl

—Am. J. Pharm. 1910, v. 82, p. 260.

Rabow, S., calls attention to the objectionable features of the trade names of some of the newer remedies, more particularly the apparent duplication of names for the same substance or the use of similarly sounding names for widely varying substances. He presents quite a list of names of the latter type.—Therap. Montash. 1910, v. 24, pp. 96–97.

Xrayser II, commenting on the Ph. Germ. V treatment of proprietaries, finds the omission of aspirin, heroin, urotropin and veronal and the admission of novocain, stovain, tannalbin and tannigen hard to understand. He fails to see that diethylbarbituric acid is more convenient than veronal for prescription purposes, and it would have been a simple matter to coin names abbreviated from the scientific designation.—Chem. & Drug. 1910, v. 77, p. 929.

Hunt, Reid, calling attention to the provincialism which has characterized pharmacopœial nomenclature, notes that some of the specially devised pharmacopœial names may acquire a limited acceptance in their own countries, but they rarely enter the world's literature; most of them will probably remain literary curiosities. Thus, for instance, "phenazonum" and "pyrazolonum phenyldimethylicum," the British and German official names for antipyrin, do not occur up to the present in the *Index Medicus.*—J. Am. M. Ass. 1910, v. 54, p. 175.

LaWall, Charles H., thinks that one of the greatest abuses of modern pharmacy and medicine has crept in through the difficult terminology of synthetic organic compounds. Frequently, the descriptive chemical name has been shortened into some euphonious trade name, which is readily kept in mind by the prescriber, but which gives no clue to its composition.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 162.

The Medical Society of the State of New York recommends that the simplest possible titles be employed.—Drug. Circ. 1910, v. 54, p. 255.

The members of the Chicago Branch endorse the present plan of nomenclature for synthetic products, using abbreviated chemical names.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 296.

Beringer, George M., thinks that while the contraction of chemical names for synthetics has been criticised it is probably the best that can be done at the present time. He also expresses the belief that Latin titles should be as nearly as possible correct and that the Pharmacopœia should contain a comprehensive list of synonyms.—*Ibid.* p. 85.

Raubenheimer, Otto, thinks that the coined trade-mark names are too nearly alike and may even cause dangerous errors. Similarity in chemical names should also be avoided.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1090.

Wood, H. C., Jr., contends that those names which approximate chemical accuracy suggest to the physician pharmacologic relation.—J. Am. M. Ass. 1910, v. 54, p. 438.

Rathenau, F., discusses the use of trade-marks for medicaments and points out that the appropriation of a name as a generic title of a product invalidates it as a trade-mark.—Chem. Ztg. 1910, v. 34, pp. 573–574.

Stewart, F. E., asserts that it is an axiom of law that the name of an article of commerce cannot be a trademark, for it cannot at the same time perform the functions of an appellative, to distinguish an article from other articles of commerce, and a trademark, to distinguish a brand from other brands of the same article.—Am. J. Pharm. 1910, v. 82, p. 565.

Hale, Worth, calls attention to some of the complications that have arisen with the nomenclature of new remedies, and points out that pharmacists frequently have in stock, because of special nomenclature, five, ten, possibly twenty duplications of the same chemical substance or pharmaceutical mixture.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 11.

Solis-Cohen, Solomon, thinks that a wise handling of the subject of new remedies may result in the adoption of a general system of scientifically controlled nomenclature, with the elimination of trade-marks, except as "brands" of the manufacturer.—P. C. P. Alumni Report, 1910, v. 47, p. 176.

Osborne, Oliver T., recommends that the 1910 Pharmacopœia give the most simple titles possible to all new drugs, especially to the synthetic drugs. If it is considered impossible, or inadvisable, to make an official title of a drug simple, an official abbreviation should follow the name of the drug. He also recommends that the genitive be given after each Latin title.—J. Am. M. Ass. 1910, v. 54, p. 50. See also Bull. Am. Pharm. Ass. 1910, v. 5, p. 235.

Bastedo, W. A., asserts that the teachers would desire the addition of the genitive ending of the Latin name of each drug and the accusative ending for names of preparations, such as compound cathartic pills.—N. York M. J. 1910, v. 91, p. 1335.

Remington, Joseph P., thinks the medical profession is not quite consistent in hammering the Pharmacopœia for its chemical nomenclature. He sees no reason why physicians cannot abbreviate the long chemical names with the facility which they found in abbreviating "tinctura," "pilula," etc.—J. Am. M. Ass. 1910, v. 54, p. 438.

Caspari, Charles, Jr., thinks that the pharmacopœial names are as simple as it is possible to make them without encroaching on the field of trade-markism.—*Ibid.* p. 439.

The Journal of the American Medical Association (1910, v. 54, p. 1885) notes that official abbreviations are to be appended to all articles which are used in prescriptions. Their adoption by physicians will be optional, of course, but it will tend to prevent mistakes.

Thum, John K., states that whenever an official compound is made and sold by different manufacturers under different names, as hexamethylenamine, the Pharmacopœia should state that these apply to compounds similar to the official one.—Am. J. Pharm. 1910, v. 82, p. 202.

A book review of Bull. No. 58, speaking of the comments on nomenclature, expresses the belief that, if these criticisms stand for anything, they may be taken to mean that many Latin titles of official articles now recognized will not appear in their present form in the forthcoming edition of the Pharmacopœia.—Pharm. Era, 1910, v. 43, p. 228.

Wiley, H. W., thinks that the nomenclature is one of the more important features of the National Formulary to be corrected and safeguarded.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 15.

Kebler, Lyman F., reports the opinion that the nomenclature of the National Formulary should not be misleading in any particular, and that if a preparation contains a habit-forming drug the name of such drug should form a portion of the name of the product.—*Ibid.* p. 144.

The City of Washington Branch of the A. Ph. A. recommends that no name be used in the National Formulary which misleads in any particular.—*Ibid.* p. 210.

Raubenheimer, Otto, recommends that the dispensing pharmacist devote himself to the study of synonyms, pharmaceutical, chemical and botanical.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1091. See also Bull. Am. Pharm. Ass. 1910, v. 5, p. 214.

Clayton, Charles, presents a list of synonyms for widely used drugs and suggests that they be included in the next edition of the U. S. P.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 372–374.

Remington, Joseph P., discusses some of the reasons for including popular synonyms in the Pharmacopœia for the purpose of preventing the dishonest dealer from selecting some synonym which is obscure and not covered by the pharmacopœial title.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 616–617.

Rusby, H. H., thinks the prospect of having more synonyms in the Pharmacopœia is a cause for congratulation.—*Ibid.* p. 617.

The American Pharmaceutical Association approves recommendations on botanical names, titles for synthetics and the inclusion of a table of synonyms.—*Ibid.* pp. 535, 536, 538.

The Kings County Pharmaceutical Society recommends that a complete list of synonyms be included in the next U. S. P.—Drug. Circ. 1910, v. 54, p. 254.

Beringer, George M., thinks the Pharmacopœia should contain a comprehensive list of synonyms.—J. Am. M. Ass. 1910, v. 54, p. 396. See also Diekman, Bull. Am. Pharm. Ass. 1910, v. 5, p. 83 and Coblentz, Proc. Maine Pharm. Ass. 1910, p. 45.

Davis, Charles H., thinks that pharmacists will appreciate the extended list of synonyms but it will mean more care to be taken to see that their labels are right.—Proc. Maine Pharm. Ass. 1910, p. 39.

Breves, Rudolph, thinks that every pharmacist and physician is heartily in favor of having the list of synonyms enlarged.—Practical Druggist, 1910, v. 28, p. 38.

The members of the Chicago Branch of the A. Ph. A. are in favor of restoring important synonyms to the text of the U. S. P.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 296.

An editorial (Am. Druggist, 1910, v. 56, p. 189) expresses the belief that synonyms will figure more largely in the next edition of the Pharmacopœia than in the present eighth edition.

Wetterstroem, Theo. D., thinks that a list of synonyms would cause a great deal of trouble in some of the States. He suggests that if synonyms are given they should be limited to medicinal substances only, and that no synonym should be used that indicated the commercial name of a drug.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 812.

The City of Washington Branch of the A. Ph. A. recommends that there be not introduced into the National Formulary as many synonyms as possible for the several preparations.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 211.

Remington, Joseph P., thinks that a long list of synonyms would be dangerous and would lead to confusion and unnecessary complication. Many names that are practically identical are nevertheless used for substances that may differ materially.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 88. Also J. Am. M. Ass. 1910, v. 54, p. 396.

3. COST AND SIZE.

Rusby, H. H., thinks that more money is needed for pharmacopœial work, and suggests that the necessary revenue be obtained by increasing the price of the Pharmacopœia.—Drug. Circ. 1910, v. 54, p. 620.

Lohmann, H..J., objects to increasing the price of the Pharmacopœia, as many pharmacists could not afford to have a copy if it were costlier, and asserts that even today there are pharmacies conducted according to the standards of the U. S. P. 1870.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 84.

Diner, Jacob, thinks that any additional expense entailed in complying with the wide spread demand for publicity could be gotten over by raising the price of the book.—*Ibid.* p. 84.

Wearn, W. H., reports that the consensus of opinion at the U. S. P. Convention appeared to be that increased revenue for the Pharmacopœia could be secured by suitable royalty on each work using the text of the Pharmacopœia.—Proc. North Carolina Pharm. Ass. 1910, p. 47.

Fleet, C. B., reports that the proposition to require a stiff fee for membership in the Convention was voted down and a heavy charge will be made for the use of the copyright by the U. S. Dispensatory and kindred works.—Proc. Virginia Pharm. Ass. 1910, p. 17.

An editorial (Drug. Circ. 1910, v. 54, p. 265) points out that the price at which the Pharmacopœia is to be sold and the disposition of the money received for it was left by the Convention to its Board of Trustees. See also editorial.—Bull. Pharm. 1910, v. 24, p. 268.

An editorial (Am. Druggist, 1910, v. 56, p. 267), commenting on the pharmacopœias of the world, points out that the sale price of the several pharmacopœias reviewed varies between 46 cents and $4.

Wiley, Harvey W., expresses himself as being desirous of securing a permanent endowment for the United States Pharmacopœial Convention.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 605.

He also expresses the hope that the present Board of Trustees will be able to turn over to the next convention a sum of money sufficiently large to be used as a permanent endowment for the continuance of the work.—*Ibid.* p. 640.

Beringer, George M., in the report of the delegates to the U. S. P. C., points out that the Trustees presented only a synopsis of the financial transactions of the outgoing Committee of Revision, and this was adopted without discussion.—Proc. New Jersey Pharm. Ass. 1910, p. 43.

Motter, Murray Galt, states that it has been pointed out that "the financial statement made to the Convention was in no wise satisfactory, explicit, or in justice to the intelligence of the body to which it was delivered."—Bull. Am. Pharm. Ass. 1910, v. 5, p. 642.

Dohme, A. R. L., points out that there is now great complaint of the expense of the Pharmacopœia and that anything tending to add to this expense would be considered objectionable. He thinks that a special edition in loose leaf form could be arranged for, providing a sufficient number of pharmacists desired such a book.—Proc. Maryland Pharm. Ass. 1910, p. 181.

Huniston, Ray, advises to cut the Pharmacopœia in two and make it readable and reliable.—Northwestern Druggist, 1910, v. 11, Feb., p. 18.

Goetting, E. C., thinks that the general style of the German Pharmacopœia, and the fact that it is less voluminous, are decided advantages. The text is short and distinct, and anything not necessary for the purpose has been avoided.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1157–1160.

An editorial (Nat. Druggist, 1910, v. 40, p. 111) comments on the fact that the Pharmacopœia has become too unwieldly and bulky to make it convenient to handle and makes a number of suggestions for condensing considerable of the material therein.

An editorial (Canad. Druggist, 1910, v. 22, p. 261) expresses the opinion that the suggestion of the National Druggist, as to the bulk of the U. S. P., is equally applicable to the Ph. Brit. and well worthy of consideration.

An editorial (Apothecary, 1910, v. 22, No. 1, p. 13) asserts that if the retail druggists and the doctors have their way about the next Pharmacopœia, it will be greatly simplified and compacted. The doctors want to have many of the little used agents eliminated and the druggists want to have some of the methods simplified.

Leffmann, Henry, thinks that the size of the book could be materially reduced, without interfering with its usefulness in the field for which it is intended. Many of the analytic processes could be included in special bulletins as is now done in food analysis work, and to these the special workers could refer.—J. Am. M. Ass. 1910, v. 54, p. 431.

Hunt, Reid, suggests that with a certain amount of elimination there would be time for the Committee of Revision to consider more fully the standards for really important articles, and it might be possible to complete the revision in a shorter time; the determination of standards for what are, for the physician, articles of minor importance (such as whisky) often requires as much or more time and work as does that for drugs which are of the utmost value.—J. Am. M. Ass. 1910, v. 54, p. 174.

4. PUBLICITY.

Leffmann, Henry, thinks that during the preparation of the revision, the work should be brought before the public for discussion through publication of the more important changes.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 170. Also J. Am. M. Ass. 1910, v. 54, p. 431.

Turner, J. L., thinks that many of the criticisms of the U. S. P. could have been made before it was published, and some method should be adopted by which suggestions for the Pharmacopœia could be sent out for criticism, at least to those vitally interested, before adoption.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 974.

Rusby, H. H., expresses himself as being in favor of the publication in advance of all proposed standards and tests, believing that no other course can so well preclude errors of judgment or intentional deception.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 82. See also p. 84.

Lohmann, H. J., thinks that while publicity may be a good thing, it ill becomes the pharmacal world to require the Revision Committee to submit its work for judgment.—*Ibid.* p. 83.

Hill, W. B., thinks that as much publicity as possible should be given to the work of the Revision Committee so as to keep up the interest of both the medical and the pharmaceutical professions.—Western Druggist, 1910, v. 32, p. 17.

Andrews, Launcelot W., does not think that more publicity should be given through the medical and pharmaceutical press to the work of the Revision Committee. His idea is to put fit men on the Committee and let them handle the work in silence.—*Ibid.* p. 20.

Kremers, Edward, calls attention to the extent to which publicity had been given deliberations of the Committee of Revision in former drafts of the Pharmacopœia.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 975.

McKesson, Donald, thinks that the U. S. P. Revision Committee should accept the recommendation of the various pharmaceutical and drug trade associations to publish the comments on present standards and recommendations for changes that they have before them.—Drug Topics, 1910, v. 25, p. 19.

Remington, Joseph P., thinks that the writers who are demanding publicity have failed to give a practical plan which will satisfy the demand for publicity and at the same time work no injury or loss of time in the publication of the Pharmacopœia.—Am. Druggist, 1910, v. 56, p. 134. Also Practical Druggist, 1910, v. 27, p. 370.

An editorial (Nat. Druggist, 1910, v. 40, pp. 1–2), in a discussion on publicity in pharmacopœial revision, controverts some of the opinions that have been voiced regarding the difficulties involved and expresses the belief that the best interests of scientific pharmacy, and welfare of the public and the honor of the Revision Committee itself demands that the proceedings of the Committee be made public.

Wilbert, M. I., thinks it will be quite possible for the Committee of Revision to publish advance sheets of the Pharmacopœia in the form of printed bulletins. These printed bulletins could be copyrighted, and then sent out to anyone who is willing to pay a sufficient sum to cover the expense.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 975.

The American Pharmaceutical Association endorses a request that the Committee of Revision submit proposed changes in the U. S. P. to the members of the A. Ph. A. for review before final adoption for inclusion in the U. S. P.—*Ibid.* p. 547.

Remington, Joseph P., thinks that publishing the revised text in its entirety for criticism before final adoption is impractical. He suggests a committee on publicity which would submit to the journals such changes as are proposed and in this manner secure the advantages of publicity.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 26.

An editorial (Bull. Pharm. 1910, v. 24, p. 1) refutes the arguments of J. P. Remington who, in an important after dinner speech at the annual banquet of the alumni association of the New York College of Pharmacy, sought to head off, or at least to qualify, the demand for publicity in the work of the next Revision Committee. Merely to announce a few important decisions after they had been finally settled would afford no chance for appeal. See also pp. 49 and 136.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 176) points out that the interest in pharmacopœial affairs is so general that greater publicity is demanded and will naturally be furnished.

An editorial (Drug. Circ. 1910, v. 54, p. 265) states that the request that publicity be given to standards and tests to be proposed by the Committee of Revision before final adoption came from the National Wholesale Druggists' Association and was concurred in by the Pharmacopœial Convention.

An editorial (N. A. R. D. Notes, 1910, v. 10, p. 911) commends the recommendation adopted by the Pharmacopœial Convention to give publicity to the work of the Committee of Revision and asserts that the drug trade of this country has a right to know of the progress of the work of revision.

Wilbert, M. I., thinks that paragraph No. 14 is perhaps one of the most important of the general principles adopted by the U. S. P. Convention, and points out that the value of preliminary publication of proposed pharmacopœial standards is well illustrated by the discussion that has been aroused in German and English pharmaceutical journals, through the preliminary publication of proposed changes in the German and British Pharmacopœias.—Am. J. Pharm. 1910, v. 82, p. 259.

An editorial (Bull. Pharm. 1910, v. 24, p. 267) expresses gratification over the unanimous approval of the principle of publicity, and states that the drug trade simply desires to be informed of the more important proposals of the committee in order that it may have a chance to be heard if it desires to be heard.

Jensen, Peder, thinks that in the event that reports should not be forthcoming with a degree of regularity that would keep the public posted, a movement will and should be inaugurated to look closely into the matter.—Pacific Drug Review, 1910, v. 22, Oct., p. 18.

An editorial (Nat. Druggist, 1910, v. 40, p. 257) expresses the belief that pharmacists, manufacturers and wholesalers and even physicians will evince more interest in the Pharmacopœia, if the revision is carried on more publicly than heretofore and discussion is free.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 322) urges early publication of suggestions for the revision of the Pharmacopœia.

Wiley, Harvey W., thinks that the work of revision of the Pharmacopœia will be greatly aided by a frank practice of publicity.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 607. See also p. 640.

Jensen, Peder, urges pharmacists in all parts of the country to make it their particular business to watch the forthcoming reports of the Revision Committee, and comment freely and emphatically on them, in order that the Pharmacopœia might reflect the intelligence, pharmaceutical ability and common interests of the pharmacists of the United States.—Pacific Drug Review, 1910, v. 22, Aug., p. 20.

An editorial (Am. Druggist, 1910, v. 56, p. 71), in commenting on the revision of foreign pharmacopœias, states that in almost every case steps are taken to secure an expression of opinion from the physicians and pharmacists in active practice as to what should and what should not be included in the Pharmacopœia.

The proposed changes to be embodied in the Ph. Germ. V are reproduced entire.—Pharm. Zentralh. 1910, v. 51, pp. 172, ff.

The Chemist and Druggist (1910, v. 77, p. 898), commenting on the Ph. Germ. V, states that as a departure from the usual custom, a part of the draft of the new edition was published early this year (*Ibid.* March 12, 1910, p. 401). The final editing of the work was entrusted to a commission of six members, and then the whole was again gone over by the Imperial Board of Health.

An editorial (*Ibid.* p. 588) commends the course followed by Hill and Umney, and Lucas and Bird in submitting their suggestions on the pharmacopœial oils for criticism before final adoption.

For discussion on publicity see *Ibid.* v. 76, pp. 7, 137, 257, 552.

Wilbert, M. I., points out that the revisers of the British Pharmaceutical Codex are giving an unusual amount of publicity to the proposed changes that are to be introduced in that book.—Am. J. Pharm. 1910, v. 82, p. 573. See also editorial, Pharm. J. 1910, v. 31 (85), p. 1.

A news note (Oil, Paint and Drug Reporter, 1910, v. 78, December 26, p. 28G) announces that the Department of Agriculture refuses to refrain from publishing charges before defense is heard.

5. TIME OF PUBLICATION.

Wiley, H. W., is reported as stating that the U. S. P. IX will be ready in May 1912.—Am. Druggist, 1910, v. 57, p. 350.

Whelpley, Henry M., asserts that the revised Pharmacopœia will not be published for two or three or more years, and will be officially designated as the U. S. Pharmacopœia IX, which is more appropriate than U. S. Pharmacopœia of 1910.—J. Am. M. Ass. 1910, v. 54, p. 221.

Meissner, F. W., thinks that the U. S. P. IX will be published within a period of two years, but in the meantime the Revision Committee requires the aid of every pharmacist in the United States to assist in the work of revision.—Proc. Indiana Pharm. Ass. 1910, p. 54.

Remington, Joseph P., thinks it was undoubtedly wise of the Committee of Revision that, unheeding the clamor and jibes of the unthinking and impatient public who demanded an early issue of the book, the members of the Committee worked earnestly but not hurriedly until the work of revision was accomplished.—Abstr. Proc. U. S. P. C., 1910, p. 23.

Jeancard and Satie think that a pharmacopœia which is to be in force for ten years or longer should make use of general limits only, so as to provide for the extreme of variability.—Pharm. Era, 1910, v. 43, p. 141.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 35) points out that there is a general feeling that once in 10 years is not sufficiently frequent for the appearance of revised editions of the U. S. P.

Davis, N. S., thinks that too frequent revisions of the Pharmacopœia would destroy its value as a standard because the standards would be constantly changing. The present decennial revisions are not frequent enough but annual or semi-annual revisions are not desirable.—Am. Druggist, 1910, v. 56, p. 16.

Flemer, Lewis, thinks it would be preferable to issue an entirely new edition of the U. S. P. and N. F. at least every five years followed by annual supplements in pamphlet form.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 15.

England, J. W., thinks that the developments in the science and art of pharmacy in these days are so rapid and varied that even a revision of the N. F. every 5 years does not meet the needs of the times—Drug Topics, 1910, v. 25, p. 114.

An editorial (Canad. Druggist, 1910, v. 22, p. 125) notes that while the U. S. P. is revised decennially, a movement is on foot looking to a change; if a new work in its entirety is not produced every five years, it is proposed that a supplement be issued in 1915.

6. DOSES.

Hatcher, Robert A., discusses the relation between dosage and the method of administration.—J. Am. M. Ass. 1910, v. 55, pp. 746–749.

Brady, William, notes that to obtain the full benefit of the administration of drugs in disease it is quite as necessary to know the frequency as it is to know the quantity of dosage.—N. York M. J. 1910, v. 91, p. 212.

Richet, Ch., discusses the biologic law which governs the toxicity of simple bodies and comments on the fruitless efforts to establish a relation between chemic constitution and toxic action.—Compt. rend. Soc. Biol. 1910, v. 69, p. 433.

Carmichael, T. H., states that the new knowledge, with reference to the action of drugs, is obtained through the use of minute doses which act upon the psychic nature of the subject. . . . It was reserved for Hahnemann and his collaborators to develop what may be called the personality of a drug, a sort of living drug pathogenesis which corresponds in its individuality to the varying character with which the same disease manifests itself in different individuals.—J. Am. Inst. Homœop. 1910, v. 2, p. 265.

Maurel, E., discusses the importance of the order in which the different anatomical elements are affected, as to sensitivity and toxicity, likewise of minimal fatal doses, from the point of view of pathology and therapy, with a bibliographic list.—Compt. rend. Soc. Biol. 1910, v. 69, p. 362.

Osborne, O. T., recommends that the average adult dose appear after each drug and each preparation of it, not the range of dose, i. e., minimum to maximum, as there is no exact under or over-limit of dose. The dose is enough to accomplish the object aimed at by the prescriber, and all he cares to know is the average dose.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 235.

The Medical Society of the State of New York recommends that the present plan of mentioning the average dose only of each internal drug be continued.—Drug. Circ. 1910, v. 54, p. 255.

Coleman, Warren, believes that maximum doses should be given in the Pharmacopœia.—N. York M. J. 1910, v. 91, p. 1333.

Needham, R. H., thinks that the average dose should be retained in the N. F.—Proc. Texas Pharm. Ass. 1910, p. 71.

Whelpley, Henry M., suggests that the amount of drug in the average dose of every potent preparation should be stated. J. Am. M. Ass. 1910, v. 54, p. 221.

Remington, Joseph P., thinks that the doses of pharmacopœial articles should be revised exclusively by the medical members of the Committee of Revision.—Am. Druggist, 1910, v. 56, p. 133. Also Midl. Drug. 1910, v. 44, p. 86, and Bull. Am. Pharm. Ass. 1910, v. 5, p. 88.

The members of the New England Branch of the A. Ph. A. think that if doses are to be stated in the U. S. P. they should be maximum.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 150.

Raubenheimer, Otto, discusses the dosage statements in the U. S. P., presents a number of references in favor of maximum, single and daily doses and recommends that the U. S. P. IX should include at least a table of maximum, single and daily doses.—Drug. Circ. 1910, v. 54, pp. 405–406. See also Bull. Pharm. 1910, v. 24, pp. 366–368, 475 and 169.

Melvin, J. Tracy, criticises the use of the term "average dose," which to him means nothing, in place of the "maximum safe dose" which would be valuable. Western Druggist, 1910, v. 32, p. 19.

Lowe, Clement B., discusses the doses of the U. S. P. and expresses the belief that it would have been of greater value to give minimum and maximum doses as well as the maximum dose for 24 hours as is done in many of the European pharmacopœias.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 671–673. See also P. C. P. Alumni Report, 1910, v. 47, p. 151.

Stevens, A. B., thinks it would be absurd to have minimum doses in the Pharmacopœia, but certainly there should be a maximum dose.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 803.

Hallberg, C. S. N., thinks that a maximum dose cannot be fixed because there is no such thing and a standard cannot be fixed for a thing that does not exist.—*Ibid.* p. 803.

The American Pharmaceutical Association approves the recommendation that: "The doses be continued in the Pharmacopœia under the rule adopted for the 8th Revision, and that these be corrected wherever necessary and that in addition, for potent remedies, the maximum single and maximum daily dose be given."—*Ibid.* p. 535.

Francis, J. M., notes that the proposition to include both maximum single and maximum daily doses in the next Pharmacopœia was bitterly opposed by the medical men.—Proc. Michigan Pharm. Ass. 1910, p. 45.

An editorial (D.-A. Apoth. Ztg. 1910–11, v. 31, p. 48) deplores the fact that the proposition to include maximum doses in the U. S. P. IX was not endorsed by the members of the pharmacopœial convention.

An editorial (Drug. Circ. 1910, v. 54, p. 347) comments on the dosage statements in the U. S. P. and concludes that although the Convention advised the revision committee to continue the statement of average doses, the question is not a settled one and is still being discussed. And there is still the hope that if any doses are stated in the Pharmacopœia the figures given will mean something, which is more than the present ones do.

The Journal of the American Medical Association (1910, v. 54, p. 1885) points out that the experiment of stating the "average dose", which was made in the last revision, has been found acceptable; but the medical delegates were as a unit against the recognition of official "maximum doses", and a motion to introduce these was lost after a thorough discussion.

Davis, Charles H., in reporting on the discussion on doses at the U. S. P. C., says pharmacologists objected to the introduction of maximum doses because they felt themselves unable to state in every case just what the maximum dose should be. Thus an attempt in this line would be a farce.—Proc. Maine Pharm. Ass. 1910, p. 37.

An editorial (N. York M. J. 1910, v. 91, p. 1301) states that the arguments of the pharmacists at the U. S. P. C. 1910 for a table of maximum doses were fortunately overruled.

The Kings County Pharmaceutical Society recommends that maximum doses, single and daily, be stated and physicians required to confirm their specification of larger doses.—Drug. Circ. 1910, v. 54, p. 254.

Engstrom, Ernst O., commends the proposition to include in the U. S. P. a table of maximum doses.—Proc. Massachusetts Pharm. Ass. 1910, p. 85.

Coblentz, Virgil, notes that there is no such thing as a maximum dose of any remedy.—Proc. Maine Pharm. Ass. 1910, p. 44.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 162) calls attention to the desirability of designating or calling attention to unusual or dangerously large doses of active medicines.

An editorial (N. A. R. D. Notes, 1910, v. 10, p. 27) suggests indicating exceptionally large doses by underscoring the title as well as the quantity.

v. Gutfield, Fritz, outlines a simplified method of indicating on prescriptions the intentional exceeding of maximum doses.—Apoth. Ztg. 1910, v. 25, pp. 815–816.

An editorial (Lancet, 1910, v. 178, p. 873) quotes a German correspondent who states that Great Britain figures among the small number of countries which have taken no steps to settle the question of dosage. The customs in various countries whereby unusual doses are indicated are enumerated and a tabulated statement illustrates the variations in some of the different national Pharmacopœias.

"St. G." points out that the new Russian Pharmacopœia contains a table of maximum doses for adults and outlines a method for estimating the maximum doses for children.—Pharm. Ztg. 1910, v. 55, p. 893. See also Am. Druggist, 1910, v. 57, p. 296.

Dunning, H. A. B., thinks that one of the most important improvements in the Ph. Fr. V is the table of maximum doses of drugs which are not to be exceeded except in special instances. He thinks that the term maximum can readily be defined as meaning a dose sufficiently large to question.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1153.

Kraemer, Henry, points out that in order to satisfy the expressed wish of most of the apothecaries of Holland, who desired to have a guide that they might follow, the single maximum dose and the maximum dose in 24 hours for an adult are given in the Ph. Ndl. IV, these being given in the index.—Am. J. Pharm. 1910, v. 82, p. 523.

The Budapest Correspondent (Lancet, 1910, v. 178, p. 961) notes that in the new Ph. Hung. III, the officially assigned maximum doses of certain drugs, especially of those which may act as poisons, are altered in several instances, generally in the direction of diminution.

Kremel, A., presents a table showing the variations in the maximum doses as given in the Ph. Hung. III and in the Ph. Austr. VIII.—Pharm. Post, 1910, v. 43, p. 122.

7. ANTIDOTES.

Lewin, L., discusses the occurrence of cases of poisoning in chemical works and methods for overcoming them.—Apoth. Ztg. 1910, v. 25, pp. 235–237; 244–245.

He also discusses the general principles of chemical antidotes. They are shown to be of value only when the products of reaction between the poison and the antidote are soluble, non-toxic compounds, readily discharged from the body.—Chem. Ztg. v. 33, pp. 1217–1218, 1229–1230. Chem. Abstr. 1910, v. 4, p. 951.

Hoebrechts, J., discusses the diagnosis and general treatment of the principal intoxications.—Ann. pharm. Louvain, 1910, v. 16, pp. 97–99.

Gane, E. H., thinks that it would be not at all a bad idea if the Pharmacopœia devoted a few pages to the general principles to be followed in preparing antidotes for use in emergency poisoning cases, and this would be well within the province of the work.—Drug Topics, 1910, v. 25, p. 229.

The Kings County Pharmaceutical Society recommends that a complete list of antidotes be given in the next U. S. P.—Drug. Circ. 1910, v. 54, p. 254.

Kraemer, Henry, points out that, in order that the pharmacist may be prepared to act in cases of sudden poisoning, there is given in the Appendix of the Ph. Ndl. IV an outline of procedure and a list of suitable antidotes which may be easily dispensed by him, he being required to summon a physician as soon as practicable.—Am. J. Pharm. 1910, v. 82, p. 524.

An editorial (Therap. Gaz. 1910, v. 34, pp. 20–21) discusses the use of adrenalin as an antidote and calls attention to the communication by Jona, who reports observations on the antidotal action of adrenalin in cases of poisoning by potassium cyanide, strychnine and other rapidly acting drugs.

Falta and Sycovic (Berl. klin. Woch., Oct. 25, 1909) report observations on the antidotal properties of epinephrine to counteract the toxic symptoms induced by strychnine in the frog.—Merck's Rep. 1910, v. 19, p. 48.

8. WEIGHTS AND MEASURES.

Kraemer, Henry, reports on suggestions for popularizing the "International Metric System of Weights and Measures."—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 504–505.

Stevens, A. B., presents a number of facts about the metric system which are not generally known.—*Ibid.* pp. 505–506.

An editorial (Pharm. J. 1910, v. 31 (85), p. 412) calls attention to the favorable progress made with reference to the adoption of the metric system of weights and measures, and quotes the statement of J. Lingham Lee to the effect that the metric system had been adopted by all civilized countries with the exception of Great Britain, the British Colonies, and the United States, but it had been officially recognized by the Medical Departments of the Army and Navy in America.

An unsigned article (Nat. Druggist, 1910, v. 40, p. 271) expresses the belief that the use of the metric system is growing in England, and presents a table showing the steady increase in the number of metric weights and measures verified in the United Kingdom in the years 1902–1909.

A resolution endorsing the metric system of weights and measures adopted by the Chicago Branch of the A. Ph. A. for submission to the National Convention of City Sealers is reprinted.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 70.

Woodbury, Malcolm S., describes 2 simple methods of applying the metric system in prescription writing.—Therap. Gaz. 1910, v. 34, p. 90.

Stevens, A. B., contributes a paper on the international system of weights and measures and calls attention to some of the practical advantages of the metric system.—Proc. Michigan Pharm. Ass. 1910, pp. 109–112.

Needham, R. H., thinks that the antiquated apothecaries' system of weights and measures should be eliminated entirely from the text of the National Formulary.—Proc. Texas Pharm. Ass. 1910, p. 71.

Apple, F. M., advocates the use of alternate weights and measures in the formulas of the Pharmacopœia and of the National Formulary, and asserts that comparatively few pharmacists make up their official preparations by the use of metric weights and measures.—Proc. Pennsylvania Pharm. Ass. 1910, pp. 263–267. See also Bull. Am. Pharm. Ass. 1910, v. 5, 215–216.

Eliel, Leo, thinks there is no reason for retaining the alternate system of weights and measures in the N. F. If there is anyone who cannot divorce himself from the archaic system of troy weights and liquid measures, systems that have been discarded by all civilized nations excepting the English speaking, he would better separate himself from the drug business.—Proc. Pennsylvania Pharm. Ass. 1910, p. 364.

Thum, John K., thinks that the difficulties of the metric system are more apparent than real, and points out that formulas written in the metric system enable both the physician and the pharmacist to tell at a glance the percentage of each ingredient contained therein.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 254.

Burge, J. O., has found the metric system of weights and measures easier and more satisfactory than the old system.—*Ibid.* p. 420.

Bond, J. B., does not want to see the metric system used exclusively in the U. S. P. and the National Formulary. He thinks we have not reached the point in the United States when we can safely displace the old system. There is ample time yet to do this.—Proc. Arkansas Pharm. Ass. 1910, p. 86. An interesting discussion participated in by Schachleiter, Bond, Eberle, Weimar and others, is reported at length.—*Ibid.* pp. 86–92.

Brown, L. A., finds that one source of error in the making of galenical preparations is the aversion of the retail druggist to the use of the metric system. The druggist seems to feel that he gets so few prescriptions in that system that it is not worth while to be posted thoroughly on it, and he does not realize the ease and accuracy with which the metric system can be used.—Proc. Kentucky Pharm. Ass. 1910, p. 92.

Kebler, Lyman F., reports the opinion that the metric system alone should be employed in giving the quantity or proportion to be used in preparing the various products.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 146. See also p. 210.

The American Pharmaceutical Association approved the recommendation that the metric system of weights and measures only be used in the descriptions and formulas of the U. S. P.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 540.

Wilbert, M. I., points out that pharmacists, in a greater portion, at least of Spanish America, have been trained in the Continental method of weighing liquids, and do not take kindly to the use of measures of capacity.—*Ibid.* p. 1222.

Beringer, G. M., thinks that from an American way of thinking and working, the European Continental method of weighing liquids and solids and the finished product is very unpopular and is not likely to be again attempted in this country. The failure of the effort made in the U. S. P. 1880 demonstrated that this "will not go" in this country. Yet it was one of the leading features in the Brussels Protocol.—*Ibid.* p. 773.

Hunt, Reid, points out that the introduction to the Venezuela Pharmacopœia states, as one of the reasons why the U. S. P. is not suited to use in Venezuela, is that it does not provide for the use of the metric system as followed in that and other countries using the metric system.—*Ibid.* p. 771.

Hynson, Hy. P., recommends that the formulas in the National Formulary be so constructed as to show at a glance which of the ingredients are to be weighed and which measured.—*Ibid.* p. 685.

Martin, J. H., asserts that the use of the old flare-top graduate to measure out a pint of whatever it might be will have to be relegated to the rear, because the chance of error is too great.—Proc. Kentucky Pharm. Ass. 1910, p. 91.

Raubenheimer, Otto, points out that in a Canadian or British prescription a pint means twenty fluidounces, and that in Continental prescriptions liquids are not measured, but are always weighed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1138.

Xrayser II remarks that a wineglassful used to be regarded as an ounce and a half, but it appears to be generally understood now as two ounces. He adds some interesting historical notes on the ancient cyathus, which was a measure of about this capacity used in the fifteenth century.—Chem. & Drug. 1910, v. 76, p. 955.

9. OBJECT AND USES.

Wiley, H. W., expresses the belief that the Pharmacopœia is not a book for the retail druggist, the manufacturer or the physician, but is designed primarily for the unfortunates who are in need of medicine to make them well.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 88. Also J. Am. M. Ass. 1910, v. 54, p. 397.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 34), commenting on the scope of the Pharmacopœia, expresses the belief that a Pharmacopœia has no place nor function as an ornamental work. It does not belong to the class of books which only add beauty to a library or lend an air of respectability. They are not published for profit and there is but one main excuse for their existence, and that is to be useful.

Solis-Cohen, Solomon, states that the Pharmacopœia is a book of pharmacal standards and neither an advisory nor a minority work on therapeutics.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 493.

Annis, Roscoe M., asserts that the very fact that a drug is included in the Pharmacopœia is an endorsement of its therapeutic value.—Proc. Vermont Pharm. Ass. 1910, p. 64.

An editorial (Rev. Am. Farm. y Med. 1909–10, v. 14, p. 149) discusses the mission of the Pharmacopœia and the practical uses to which various pharmacopœias are put.

Jeancard and Satie state that while it is probably still a long time off, they believe that a pharmacopœia will eventually be considered but as a manual of handy reference and not as an official tome endowed with infallibility for 10 years.—Am. Perf. 1910–11, v. 5, p. 139. Also Am. Druggist, 1910, v. 56, p. 43.

Hallberg, C. S. N., thinks the Pharmacopœia is designed to be a standard of strength, purity and quality of medicinal substances and gives directions for their preservation, valuation, preparation and compounding.—Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 40.

Wilbert, M. I., states that the first edition of the Pharmacopœia of the United States was devised by capable, broad-minded men as a safeguard to the health of the American people.—*Ibid.* p. 29.

Rusby, H. H., thinks that the primary object of the Pharmacopœia is not to teach therapeutics, to influence therapeutical practice, or to create an incorrect, however creditable, impression regarding it, but to respond to the demands of such practice by providing suitable information and standards for rendering it as safe and efficient as the conditions permit.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 440.

Hereth, F. S., states that if the pharmacopœia is to be a book for practical druggists, it must also be a practical book for druggists, and while maintaining a high standard of quality must not be too insistent upon methods.—Practical Druggist, 1910, v. 28, p. 64.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 177) points out that pharmacists must look to the pharmacopœia for drug standards covering a long list of medicines which are not prescribed by leading physicians nor lectured on in the best medical schools.

Beringer, George M., thinks that each revision of the U. S. P. should reflect the status of medical practice at the time of its issue.—Western Druggist, 1910, v. 32, p. 498.

Barton, W. M., expresses the opinion that the Pharmacopœia as it now stands cannot be accepted by medical men as a guide.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 643. See also p. 294.

Edsall, D. L., points out that much has been said about the use of the Pharmacopœia as the basis for teaching pharmacal therapy. As the Pharmacopœia is constituted at the present time this appears to be entirely impossible.—Tr. Am. M. Ass., Sec. Pharm. and Therap., 1910, p. 27.

Motter, Murray Galt, points out that unless the members of the Committee of Revision clearly realize their responsibility, the next Pharmacopœia instead of being a force will be a farce.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 642.

Beyer, H. G., thinks that any departure from the old, classical significance of the Pharmacopœia would amount to but one additional step in the therapeutic chaos in which we are already involved.—*Ibid.* p. 293.

An editorial (N. York M. J. 1910, v. 92, p. 329) notes that the complaint has been frequently expressed that the United States Pharmacopœia is more of a chemical reference work, than a guide to the correct manipulation and mixing of simple drugs to produce compounds of distinct therapeutical activity to be used on special indications.

Seidell and Wilbert think the Pharmacopœia should insure the satisfactory safe-guarding of each official article from cupidity and ignorance, in such a way that at no point will there be opportunity for deterioration or sophistication without at least a fair chance of the shortcomings being detected before the medicine reaches the consumer.—Am. J. Pharm. 1910, v. 82, p. 64.

Jensen, Peder, is unalterably opposed to a Pharmacopœia which is so scientific that only those backed by the most profound knowledge can use it, or so complicated that the different processes therein will only be available for those having at their demand the facilities of a modern manufacturing laboratory.—Pacific Drug Review, 1910, v. 22, Aug., p. 20. (See also Oct. p. 18).

An editorial (N. York M. J. 1910, v. 91, p. 1072) states that the Pharmacopœia must cater, not to the requirements of the leaders, but to the needs of the mass of the profession.

Needham, R. H., thinks that the U. S. P. should remain a book of standards. The National Formulary and Dispensatories will still be able to take care of the other preparations.—Proc. Texas Pharm. Ass. 1910, p. 105.

Raubenheimer, Otto, recommends that the individual pharmacist adhere strictly to the U. S. P. and N. F. and that he suggest improvements if possible.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1091.

Remington, Joseph P., states that natural causes have been at work, not only in this country but all over the world, to produce a diminution in the interest of physicians in the actual work of revising pharmacopœias.—Midl. Drug. 1910, v. 44, p. 86.

Diekman, George C., thinks that the Pharmacopœia should be of use to the retail druggist and asserts that some of the pharmacopœias are too scientific, that is, they have not been brought to the retail point of vision.—Proc. New York Pharm. Ass. 1910, p. 65.

Wulling, Frederick J., comments on the need on the part of pharmacists of observing more strictly the pharmacopœial requirements of official drugs and preparations.—Northwestern Druggist, 1910, v. 11, Sept., p. 25.

Kalusowski, H. E., thinks that the Pharmacopœia should be more evenly balanced and that the space devoted to the several subjects should be more in keeping with their relative importance.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 89.

Beilstein, Christian, states that the reckless use of the specification "U. S. P." on the label, when the seller does not know whether the substance so labeled complies with the pharmacopœial requirements or not, is objectionable.—Proc. N. W. D. A. 1910, p. 97.

Wilbert, M. I., calls attention to a discussion in British Medical Journals on the use of the British Pharmacopœia, and points out that pharmacopœias have been developed from the analyst's point of view rather than that of the physician.—Am. J. Pharm. 1910, v. 82, p. 573.

Edsall, D. L., thinks that desirable changes in the teaching of therapeutics can be brought about and the Pharmacopœia left in its present position of distinguished isolation, if the boards governing the admission of candidates for practice and the teachers by mutual concession reach an agreement that is mutually satisfactory regarding the substances that should be thoroughly well taught.—Tr. Am. M. Ass., Sec. Pharm. and Therap., 1910, p. 27.

Needham, R. H., asserts that preparations upon which so much care and time is spent both by the Pharmacopœia and in the theoretical and laboratory teaching of pharmacy, are sadly neglected by the physicians.—Proc. Texas Pharm. Ass. 1910, p. 105.

Flexner, Abraham, is quoted as characterizing the Pharmacopœia as "the traditional encyclopedic expression of the credulity of empiricism in medicine.—Am. J. Pharm. 1910, v. 82, p. 442.

A book review (N. York M. J. 1910, v. 91, p. 361), on Arny's "Principles of Pharmacy", notes that it contains nearly all that the Pharmacopœia of the United States contains and almost renders that work superfluous as a textbook, so faithfully are the pharmacopœial descriptions, formulas, requirements, etc., reproduced.

An unsigned article (Meyer Bros. Drug. 1910, v. 31, p. 172) points out that the U. S. P. Convention expressed the opinion that a copy of the Pharmacopœia should be at hand in each drug store and each physician's office in the United States.

An editorial (Pharm. Era, 1910, v. 43, p. 1167) points out that the New York State Board of Pharmacy has issued a ruling that: "Every pharmacy and drug store shall own and have on file at all times the eighth decennial revision of the Pharmacopœia and the latest edition of the National Formulary, and no registration certificate shall be issued a pharmacy or drug store till it complies with this rule."

Austin, A. O., reports that something like 50,000 copies of the U. S. P. eighth revision have been sold and that it was stated that the sale was greatly hampered by the use of other books containing the text.—Proc. Vermont Pharm. Ass. 1910, p. 85.

Motter, Murray Galt, referring to the business of the former Convention says: We have been told on the one hand of the "enormous sales of the book, amounting to nearly 40,000 copies the first year", and again we have been told that "the sales have not been materially greater than for the corresponding years following the preceding revision". As a matter of fact, the sales of the U. S. P. VIII did not reach the 40,000 mark until the middle of 1908.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 642. Also Pharm. J. 1910, v. 31 (85), p. 640.

10. ADDITIONS AND DELETIONS.

Wiley, Harvey W., states that drugs are supposed to be useful even if their abuse may be dangerous, and unless they have some recognized utility they cannot with any justice find a place in the Pharmacopœia.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 602.

Remington, Joseph P., thinks that admissions to the Pharmacopœia should be left to physicians, and expresses the belief that a tentative list of additions and deletions offered by the physicians would be accepted by the Committee of Revision.—*Ibid.* p. 88. Also J. Am. M. Ass. 1910, v. 54, p. 397.

Stanislaus, I. V. S., asserts that the contents of previous pharmacopœias represents the selection and dictates of the few and not of the many, and expresses the hope that in the forthcoming Pharmacopœia greater care be exercised regarding admissions and deletions.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 641.

Hunt, Reid, reports a number of recommendations made by the teachers in medical schools regarding articles to be retained in and deleted from the U. S. P.—Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 5. Also J. Am. M. Ass. 1910, v. 54, p. 173.

Francis, J. M., notes that in the U. S. P. C., 1910, there was a difference of opinion regarding the policy of admission; a small delegation of perhaps 5 or 6 men, representing the ultra-scientific portion of the medical profession, took the ground that admissions should be based wholly upon general approval or demonstration of therapeutic activity. The pharmaceutical representatives, on the other hand, took the ground that admissions should be based not so much upon demonstrated therapeutic activity as upon general consumption.—Proc. Michigan Pharm. Ass. 1910, p. 43.

An editorial (J. Am. M. Ass. 1910, v. 54, p. 1381) states that, in spite of all disclaimers to the contrary, pharmacopœial recognition at present is mistaken for endorsement, and cites as an example the prestige given wood alcohol by its admission to the Ph. Brit.

Kraemer, Henry, thinks that when a substance has a recognized value it should go into the Pharmacopœia whether used or not. Whether the reverse of this is true, he was not so certain.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 795.

Barton, W. M., expresses the hope that the Committee of Revision will inquire carefully into the possible medicinal value of the official drugs and have the courage to refuse recognition to all compounds that are demonstrated to be inert.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 295.

Kebler, Lyman F., expresses himself as being impressed by the fact that there are too few really valuable medicinal agents. He nevertheless feels that the Pharmacopœia as now constituted is a valuable adjunct in the enforcement of the pure food and drugs laws, and points out that unless the Pharmacopœia supplies such standards it will be necessary to develop them independently.—*Ibid.* p. 295.

Beringer, George M., states that no matter what physicians say in regard to admissions and deletions the pharmacist must stand his own.—Am. J. Pharm. 1910, v. 82, p. 200.

Bodemann, W., thinks that the men who work on the revision of the Pharmacopœia will known what additions to make.—Western Druggist, 1910, v. 32, p. 16.

Eccles, R. G., thinks that the questions as to what eliminations should be made in the next revision of the Pharmacopœia should be left entirely to the Committee of Revision. They only are likely to have the facts on which to base a safe conclusion.—Western Druggist, 1910, v. 32, p. 19.

Solis-Cohen, Solomon, states that admission or rejection should depend on the voice of the whole profession, and not on the voice of teachers or leaders only, whether pharmacologists, clinicians or therapeutists.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 493.

Melvin, J. Tracy, thinks that the additions and eliminations to be made in the next revision of the U. S. P. should depend upon well defined systematic rules, looking toward the positive therapeutic effect of every drug official.—Western Druggist, 1910, v. 32, p. 19.

The Medical Society of the State of New York recommends that the list of official articles be limited so as to avoid unnecessary multiplication of those of similar character or action.—Drug. Circ. 1910, v. 54, p. 255.

Beringer, George M., states that admissions and dismissals are always a bone of great discussion, yet one of the problems that must be decided early, and decided on some definite plan, before the revision can make much progress.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 768.

Rusby, H. H., thinks that it is best to refrain from dropping drugs and preparations which are, on inquiry, found to be in rather more than purely local use.—*Ibid.* p. 441.

Flowers, Hiland, while believing the Committee will be able to cope with the situation, thinks that publicity so far as additions to the Pharmacopœia are concerned would be desirable.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 84.

McKesson, Donald, thinks that many obsolete and inert articles and such as are not medicinal should be eliminated and such new articles as have been proven efficient and available should be added.—Drug Topics, 1910, v. 25, p. 19.

Coblentz, Virgil, reports that a strong effort was made by the medical fraternity at the last Convention to eliminate many articles from the Pharmacopœia.—Proc. Maine Pharm. Ass. 1910, p. 43.

Barton, W. M., favors deleting 65 per cent of the now official substances, and believes that the elimination of all inert or useless substances from the Pharmacopœia would rob the nostrum maker of much of his present day advantage.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 294.

Edsall, D. L., points out that the Pharmacopœia contains so much at present that is absolutely non-essential, that any attempt to teach what is in it would lead to still worse conditions than now exist.—Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 27.

Long, Eli H., thinks that only substances that have been found by extensive clinical observation to be medically active and practically useful are additions that should be made in the next revision of the U. S. P.—Western Druggist, 1910, v. 32, p. 18. See also J. Am. M. Ass. 1910, v. 54, p. 643.

Humiston, Ray, thinks that many old things in the Pharmacopœia should be dropped and but few new preparations added.—Northwestern Druggist, 1910, v. 11, Feb., p. 18.

Melvin, J. Tracy, believes in the abolition of old drugs and preparations whose use is limited and which have been supplanted by better drugs of identical action.—Western Druggist, 1910, v. 32, p. 19.

Hemm, Francis, thinks that many of the drugs and chemicals which are rarely called for should be eliminated so as to diminish the scope of the work materially.—*Ibid.* p. 18.

Whelpley, Henry M., thinks that the next Pharmacopœia should contain the new remedies that the medical profession considers to be of scientific value, and that we should eliminate all medicines not in general use, and all of those which are generally recognized to be inert or of questionable value.—*Ibid.* p. 16.

Mittelbach, Wm., in the report of the Committee on Pharmacopœia, makes a number of suggestions for deletions from the U. S. P.—Proc. Missouri Pharm. Ass. 1910, pp. 97–98.

Beringer, George M., presents a list of articles proposed for admission to the U. S. P. IX and enumerates a number of articles which in his opinion might be deleted.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 769–770.

Nixon, C. F., presents a list of drugs, 169 in all, for dismissal from the U. S. P.—Rocky Mountain Druggist, 1910, v. 24, April, pp. 37–38.

Rusby, H. H., presents a list of drugs which he believes should be included in the Pharmacopœia.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 82.

La Wall, C. H. (Am. J. Pharm., 82, 21) presents some suggested standards and changes for the U. S. P.—Chem. Abstr. 1910, v. 4, p. 2352.

Beringer, George M., comments on the effect of some of the suggestions regarding admission and deletion would have on the character of the pharmacopœia and the practice of pharmacy.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 769.

11. PURITY AND STRENGTH.

Rosengarten, George D., thinks that the purity rubric has proved to be one of the best innovations in the Pharmacopœia, as it gives the chemicals, whenever it is possible, a certain definite standard.—Am. J. Pharm. 1910, v. 82, p. 27.

Vanderkleed, Chas. E., points out that the greatest interest in the quality of the drugs and medicinal chemicals on the market to-day lies in its possible bearing on the new standards of the Pharmacopœia, the revision of which has just begun.—Proc. Pennsylvania Pharm. Ass. 1910, p. 131.

Remington, Joseph P., states that substances which are to be used as medicines need not be chemically or microscopically free from traces of innocuous substances which do not interfere with the therapeutic value or medicinal activity of the product and yet, if the standards insisted upon the absolute removal of these substances, the cost of the medicine would be doubled and in some cases would be almost prohibitive.—Midl. Drug. 1910, v. 44, p. 87.

Hereth, F. S., thinks that the present high standards set by the Pharmacopœia should not be lowered.—Practical Druggist, 1910, v. 28, p. 63.

Schneider, Albert, suggests that the descriptions of vegetable drugs in the U. S. P. include maximum percentages of impurity permissible.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 344.

Horn, Graham and Rosengarten express the belief that, wherever the purity rubic is given, a suitable method of assay should also be provided.—*Ibid.* p. 564. Also Proc. Am. Pharm. Ass. 1910, v. 58, p. 972.

Seil, H. A., thinks that, wherever a purity standard is given, there should be an official method for determining the standard of the substance.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 83.

Murray, B. L., comments on the need of methods of analysis of Pharmacopœial articles in connection with the purity rubric.—Merck's Rep. 1910, v. 19, p. 2.

Francis, J. M., thinks that in view of the legal status of the United States Pharmacopœia, wherever a substance is included in this authority there should also be appended under each substance, where possible, a practical and accurate description, test or assay, which would enable one to test the quality or strength of the drug.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 817.

Seidell and Wilbert discuss the purity rubric and its relation to some of the U. S. P. tests, and point out the desirability of having in connection with each monograph a satisfactory method of assay.—Am. J. Pharm. 1910, v. 82, pp. 63–68.

Coblentz, Virgil, thinks that the introduction of quantitative methods, for the estimation of allowable innocuous impurities in chemicals, would greatly enhance the volume of the text and would also introduce other difficulties. He thinks the introduction of the rubric plan is the simplest way out.—Proc. Maine Pharm. Ass. 1910, p. 43. See also Am. Druggist, 1910, v. 57, p. 384.

La Wall, Charles H., presents a number of suggestions for changes in standards and Pharmacopœial descriptions.—Am. J. Pharm. 1910, v. 82, pp. 21–26.

Patch, Edgar L., presents the report of the Committee on Drug Market and points out that reports of convictions in different sections demonstrate that due care is not exercised in making the simple pharmaceuticals.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 739–748.

Beal, J. H., explains the differences between actual and technical adulteration and gives a number of reasons for the latter.—Proc. Missouri Pharm. Ass. 1910, pp. 83–85.

Caverly, C. S., expresses the belief that adulteration does not mean mixture with inferior ingredients alone, it also means any deviation of the principal and active ingredients from the recognized standard.—Proc. Vermont Pharm. Ass. 1910, p. 11.

Sayre, L. E., reports a total of 2,182 drugs and preparations examined: 57.79 per cent of these samples were illegal and but 42.21 per cent passed the requirements.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1093–1098.

Kebler, L. F., in discussing the insufficiency of pharmacopœial standards, points out the need for taking into consideration adulterations not specifically mentioned by the Pharmacopœia.—Proc. Maryland Pharm. Ass. 1910, p. 120.

Gordin, H. M., does not think it necessary to include in the U. S. P. elementary tests for easily detected impurities and to use page upon page of descriptive matter on subjects that are known to every one who has any training in chemistry.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 121.

Riedel's Berichte (1910, p. xxvi) suggests that in testing the purity of a substance the chemist should have some indication given him as to what contaminations are likely to occur.

Schamelhout, A., precipitated a lively discussion over the standards for chemical products established by the Second International Congress for the Repression of Frauds, which, he thinks, will have a very bad influence on the quality of products furnished to pharmacists.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, pp. 330–341.

Resolutions adopted by the American Pharmaceutical Association bearing on official requirements for purity and strength are reprinted.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 500, 536, 543.

Rusby, H. H., thinks that changes in standards should not be made until positive proof of their desirability shall have been supplied.—Drug. Circ. 1910, v. 54, p. 619.

An editorial (Chem. & Drug. 1910, v. 77, p. 589) asserts that modern science has committed the pharmacopœia authorities to the plan of giving the best available chemical and physical data for testable substances, and the days of implicit trust are past.

A review of the Ph. Germ. V points out that the statement regarding purity in composition made immediately below the official titles in the Ph. Germ. V are for the information of medical men and are not official requirements regarding the purity of the article, which is fully guaranteed by the requirements and tests embodied in the monograph itself.—Pharm. Ztg. 1910, v. 55, p. 1004.

Pégurier, G., discusses at some length the question of official laboratories for drug assays.—Bull. sc. pharmacol. 1910, v. 17, Annexe, pp. 242–246. Barthe, L., replies to Pégurier.—*Ibid.* Annexe, p. 276.

12. ATOMIC WEIGHTS.

Lyons and Kebler call attention to the fact that the U. S. Pharmacopœia is quite out of date in adhering to the basis for atomic weights of H = 1.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

Eldred, Frank R., thinks that the Pharmacopœia should certainly adopt the international oxygen standard.—*Ibid.* p. 889.

The Kings County Pharmaceutical Society recommends that the atomic weights in the next U. S. P. be based on 16 as the weight of oxygen.—Drug. Circ. 1910, v. 54, p. 254.

The American Pharmaceutical Association approves the recommendation: "That the current international standard of atomic weights be adopted for all official chemical formulas and calculations based thereon."—Proc. Am. Pharm. Ass. 1910, v. 58, p. 538.

The International Conference on the unification of the methods of analysis of alimentary substances adopted a resolution that notations should be those which have been adopted by the International Committee on Weights and Measures, the atomic weights employed, those established by the International Committee on Atomic Weights.—Pharm. J. 1910, v. 31 (85), p. 675.

Meldrum, Andrew Norman, discusses the development of the atomic theory, Berthollet's doctrine of variable proportions.—Chem. News, 1910, v. 101, pp. 244–248.

He also reviews and discusses some of the various accounts of the origin of Dalton's atomic theory.—*Ibid.* v. 102, pp. 1–3.

Hepburn, Joseph Samuel, reviews the fundamental laws underlying atomic weight determinations and presents a sketch of the work of Dalton, Berzelius and Stas upon the constants of nature. He also presents a compilation of additional references on atomic weight determinations.—J. Frankl. Inst. 1910, v. 170, pp. 217–223. See also Sc. Am. Suppl. 1910, v. 70, p. 267.

Murmann, Ernst, calls attention to some general errors in the determination of atomic weights. He comments more particularly on the need for conducting all weighings in vacuo.—Oesterr. Chem. Ztg. 1910, v. 13, pp. 159–160.

Ostwald, Wilhelm, discusses the stoichiometric basic laws of the atomic theory.—Ztschr. physikal. Chem. 1910, v. 69, pp. 506–511.

Guye, Ph. A., discusses the importance of physical chemistry in the determination of atomic weights.—*Ibid.* pp. 315–336.

Scheringa, K., presents some observations on the relation of the atomic weights of the different groups of the periodic system.—Chem. Weekblad, 1910, v. 7, pp. 407–409.

Loring, F. H., calls attention to some curious regularities in the repetition of figures in the whole number and in the fractions of atomic weights included in the International Atomic Weight Table for 1911.—Chem. News, 1910, v. 102, p. 228.

Hinrichs, Gustavus, discusses the true atomic weights of oxygen and silver. He asserts that the departures for oxygen and for silver are essentially alike, so that the values O = 16 and Ag = 108 stand and fall together.—Proc. Am. Philosoph. Soc., 1910, v. 49, pp. 359–363.

Jones, Grinnel, reports experiments to determine the atomic weight of hydrogen.—J. Am. Chem. Soc. 1910, v. 32, pp. 513–517.

Clarke, F. W., presents the 17th annual report of the Committee on Atomic Weights and reviews the determinations published during 1909.—*Ibid.* pp. 255–267.

The report of the International Committee on Atomic Weights with the International Atomic Weight Table for 1910 is reprinted.—*Ibid.* pp. 1–4. See also Analyst, London, 1910, v. 35, p. 1; J. prakt. Chem. 1910, v. 81, pp. 93–96; Ber. deutsch. Chem. Gesellsch. 1910, v. 43, pp. 6–9.

The annual report of the International Committee on Atomic Weights and the International Atomic Weight Table for 1911 are reprinted.—J. Am. Chem. Soc. 1910, v. 32, pp. 1113–1116. See also J. Chem. Soc., Lond., 1910, v. 97, pp. 1861–1865; Chem. Ztg. 1910, v. 34, pp. 1105–1106.

13. CHEMICAL FORMULAS.

Puckner, W. A., discusses the abuse of chemical formulas and appeals to teachers of chemistry and others to desist from the ridiculous practice of using the chemical formula in connection with variable mixtures containing the chemical substances designated.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 714–719. See also Rep. Chem. Lab., Am. M. Ass., 1910, v. 3, pp. 7–14.

Riedel's Berichte (1910, p. xxv) recommends the inclusion of chemical formulas with the statement of the molecular weight in all cases where there is a possibility of variation in the composition of the substance.

Scholtz, M., discusses the nature of chemical formulas and the difficulty of determining the proper method of stating them.—Apoth. Ztg. 1910, v. 25, pp. 519–520.

Caspari, C. E., thinks there are many more reliable sources for structural formulas than the Pharmacopœia. If the pharmacist is really desirous of getting reliable structural formulas let him get some reliable chemical work.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 814.

Dunning, H. A. B., commends the use of structural formulas in the U. S. P. as being helpful to the pharmacist in understanding the character of many chemical formulas.—*Ibid.* p. 813.

The American Pharmaceutical Association approves the recommendation: "That structural formulas be not given in the revision of the U. S. P."—*Ibid.* p. 538.

An editorial (Am. Druggist, 1910, v. 57, p. 365) points out that among the innovations noted in the Ph. Germ. is that in the case of chemicals the structural formulas and the molecular or atomic weights follow the titles.

3. NONPHARMACOPŒIAL STANDARDS.

1. NATIONAL FORMULARY.

Hynson, Henry P., discusses the National Formulary, its genesis, character and utility.—J. Am. M. Ass. 1910, v. 54, p. 511. Also Bull. Am. Pharm. Ass. 1910, v. 5, pp. 237–245.

Jacobi, A., discusses the National Formulary and the reasons for his withdrawal of confidence in it.—J. Am. M. Ass. 1910, v. 54, p. 513.

Rusby, H. H., thinks that the National Formulary does not rest upon the same broad foundation as does the U. S. P. and could not by the most liberal possible interpretation be accorded an equal standing.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 441.

Wilbert, M. I., points out that in theory as well as in fact the National Formulary has exactly the same standing in law as has the Pharmacopœia.—Tr. Am. M. Ass., Sec. Pharm. and Therap., 1910, p. 37.

Forbes, J. Winchell, thinks that the N. F. was intended as a collection of unofficial things.—Midl. Drug. 1910, v. 44, p. 508.

McKesson, Donald, thinks that the N. F. as an official standard, in prescribing the make-up of compounds, hinders progress and improvement. It is necessary only that the ingredients be standard, and the label correct and sufficiently descriptive.—Drug Topics, 1910, v. 25, p. 19. See also Am. J. Pharm. 1910, v. 82, p. 124.

Kline, C. Mahlon, asserts that many of the preparations now in the N. F. are inelegant and to improve them would necessitate changes in the formula which was impracticable since they would no longer be N. F. preparations.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 217.

LaWall, Charles H., thinks that the N. F. contains a large number of unworthy preparations, some of which are imitations of proprietaries. The exploitation of these preparations constitutes one of the weak spots in the propaganda work.—*Ibid.* p. 160.

Needham, R. H., reports the opinion that it would be a good thing if all obsolete and worthless preparations which encumbered the pages of the National Formulary were expunged.—Proc. Texas Pharm. Ass. 1910, p. 68.

Rusby, H. H., suggests the desirability of having the National Formulary published by the U. S. P. Convention. Proc. Am. Pharm. Ass. 1910, v. 58, p. 442.

Diehl, C. Lewis, reports that the Committee on National Formulary believes that future revisions of that work should be coincident with the revision of the Pharmacopœia, but, to prevent the possibility of there being conflicting standards in the N. F. and U. S. P., suggests the placing of a statement in the preface of the

N. F. to the effect that if any of the standards adopted by the National Formulary are subsequently included in the Pharmacopœia, the standards of that work shall take precedence over those of the National Formulary.—*Ibid.* p. 526.

Stewart, F. E., discusses the uses of the National Formulary and the desirability of publishing a general receipt book.—Proc. Pennsylvania Pharm. Ass. 1910, pp. 325–332.

Apple, Franklin M., thinks that the food and drugs act has clothed the National Formulary with much dignity and this should not be ignored in the revision. He thinks the book to be quite as dignified a work as the U. S. P. and that the revisers of both books should work in harmony.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 159.

Taylor, Augustus C., thinks that the coming revision of the National Formulary is an event of considerable importance, for it may be assumed to reflect the greatly increased interest that has been taken in this branch to pharmacy and the progress made since its last revision.—*Ibid.* p. 13.

Pritchard, B. E., reports that the National Association of Retail Druggists will do all in its power to assist in perfecting the National Formulary and thus make it fully representative of the best that American pharmacy can offer in the way of extra pharmacopœial preparations.—Proc. Pennsylvania Pharm. Ass. 1910, p. 38.

Flemer, Lewis, thinks that the National Formulary should be what its name implies, a book of formulas and should contain a formula for every preparation for which there is a reasonable demand either by the laity or the medical profession.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 14.

Hynson, Hy. P., in a letter to the Council of the American Pharmaceutical Association, makes some pertinent remarks as to the scope of the N. F. and urges a complete change therein.—Drug Circ. 1910, v. 54, p. 444. See also Bull. Am. Pharm. Ass. 1910, v. 5, p. 100 and Midl. Drug. 1910, v. 44, pp. 482–487.

An editorial (Nat. Druggist, 1910, v. 40, pp. 5–6), commenting on the scope of the National Formulary, suggests that above all the pages of the Formulary should be purged of everything that in the slightest degree lends color to the charge that the book is intended to subserve the purposes of substitution. Pharmacy cannot afford at any price to appear as condoning, to say nothing of encouraging, so serious an offense.

The general principles for revising the National Formulary adopted by the City of Washington Branch are reprinted.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 210–212. See also pp. 144, 133; Proc. Am. Pharm. Ass. 1910, v. 58, pp. 23–24; Midl. Drug. 1910, v. 44, pp. 26–29; 84–86; Am. J. Pharm. 1910, v. 82, pp. 149–150.

An editorial (Pacific Drug Review, May 1910, v. 22, p. 8), discussing the National Formulary states that of all the reports of committees of the various branches of the A. Ph. A. that made by the Washington Branch is the most sensible and comprehensive, and the editor sees no recommendation in the list that he cannot heartily endorse.

An editorial (Canad. Druggist, 1910, v. 22, p. 125) commends to the careful perusal of the committee having in charge the preparation of the proposed new edition of the Canadian Formulary the clear cut definition by the City of Washington Branch of the A. Ph. A. of what the N. F. should be; the report is reproduced (*Ibid.* p. 134).

Beringer, George M., comments on some of the responsibilities and dangers confronting the committee of revision of the National Formulary.—Am. Druggist, 1910, v. 56, pp. 269–270. See also Bull. Am. Phar. Ass. 1910, v. 5, p. 218; Midl. Drug. 1910, v. 44, pp. 20–23.

Hynson, Hy. P., criticizes the form in which the text of the National Formulary is gotten up, and makes a number of suggestions for its improvement.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 684–688.

Diehl, C. Lewis, presents the report of the Committee on the National Formulary and outlines the present status of the revision.—*Ibid.* pp. 524–526.

Wiley, H. W., thinks that in connection with the National Formulary we should insist on "simplicity" as to formula, "propriety" as to name, and "conformity" with the spirit as well as the letter of the law of the land.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 16.

Bruder, O. E., thinks that the pharmacist should in the future confer more with the physician in regard to the revision of the N. F.—*Ibid.* p. 31.

Taylor, Augustus C., thinks it would be desirable to have the medical profession cooperate in the revision of the National Formulary, and points out that until such cooperation is secured pharmacists must deny any responsibility for the therapeutic value of any of the preparations.—*Ibid.* p. 14.

An editorial (*Ibid.* p. 430) expresses the belief that the work of the pharmacist must be directed to the wants of the physicians who use medicines, rather than be directed by such medical men as use but few medicines and these under protest.

Rusby, H. H., thinks there is a peculiar danger that the influence of the National Formulary will be abused, and that the results of such abuse may widen instead of closing the breach between the two professions.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 441.

Beringer, George M., thinks that the N. F. must reflect the present condition of the practice of medicine and pharmacy. Formulas must be acceptable to the average practicing physician or he will turn to proprietaries.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 219.

An editorial (J. Am. M. Ass. 1910, v. 54, p. 1312) comments on the action of the A. Ph. A. in inviting the cooperation of the A. M. A. in the revision of the N. F., and remarks that in view of the qualifications of the medical men selected it is evident that therapeutics is to be regarded as well as pharmacy in this revision.

Hatcher, R. A., calls attention to the rules of the Council on Pharmacy and Chemistry which should be observed if it is expected that the American Medical Association cooperate in the revision of the National Formulary.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 498.

Diehl, C. Lewis, reports that the revision of the National Formulary is to be based upon the principles laid down in the prefaces of the original and revised editions; i. e., such articles as are largely called for by the physicians are to be admitted, therapeutic activity alone not to determine admission.—*Ibid.* p. 525.

Wilbert, M. I., comments on the attitude taken by the American Medical Association Committee on National Formulary and its inability to cooperate along the lines suggested by the Committee on National Formulary in the revision of that book.—Am. J. Pharm. 1910, v. 82, pp. 443–444.

England, J. W., presents 10 suggestions on the National Formulary.—Midl. Drug. 1910, v. 44, p. 84. See also Drug Topics, 1910, v. 25, p. 114.

Beringer, George M., presents a number of formulas for elixirs proposed for recognition in the revision of the National Formulary.—Southern Pharm. J. 1909–10, v. 2, pp. 528–529. See also Am. Druggist, 1910, v. 56, pp. 387–388.

Thum, John K., presents a number of suggestions in connection with the revision of the National Formulary.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 252–254.

Bruder, O. E., discusses some of the proposed additions to the National Formulary.—*Ibid.* pp. 30–31. See also Southern Pharm. J. 1909–10, v. 2, pp. 269–270.

Needham, R. H., presents the report of the Committee on National Formulary and outlines a number of recommendations regarding the scope and function of that book.—Proc. Texas Pharm. Ass. 1910, pp. 68–71.

Whitney, Mrs. D. V., in a report on the National Formulary, makes a number of suggestions for improving N. F. preparations.—Proc. Missouri Pharm. Ass. 1910, pp. 105–107.

The Ohio Valley Druggists Association presents a number of suggestions for changes and corrections in the National Formulary.—Proc. Ohio Pharm. Ass. 1910, pp. 66–67.

Parse, A. C., thinks that pharmacists should aim to give the greatest publicity to the U. S. P. and the N. F. and strive to make their individual acquaintances with these books most intimate.—Proc. Arkansas Pharm. Ass. 1910, p. 85.

RECEIPT BOOK.

Hynson, Hy. P., thinks it would be desirable for the American Pharmaceutical Association to compile a book of receipts for preparations that are in use in the different sections of this country, and thus relieve the National Formulary Committee of the necessity for continuing in that book a number of formulas that are neither a credit to the book nor to the members of the Association.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 13.

Raubenheimer, Otto, thinks that a book of unofficial formulas would be a valuable reference book for the average druggist.—*Ibid.* p. 214. Also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1092.

Kebler, Lyman F., reports the opinion that a druggists' receipt book is unnecessary and would serve at best only as a repository for worthless, antiquated and defunct formulas.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 146.

2. NEW AND NONOFFICIAL REMEDIES.

Remington, Joseph P., is reported as lauding the magnificent work of the American Medical Association and particularly of its Council on Medicine and Pharmacy. He also commends the U. S. P. and N. F. propaganda.—Practical Druggist, 1910, v. 27, p. 410.

Watkins, in an editorial, says: "The slaughter of remedies by the Committee on Pharmacy of the American Medical Association will soon reduce practice to serum only. However, it is our impression that this committee knows nothing about medicines, or, if so, they are keeping such knowledge carefully concealed. It is not shown in their announcements from time to time."—Eclectic M. J. 1910, v. 70, p. 566.

Caverly, C. S., thinks that the members of the Council on Pharmacy and Chemistry have the true interests of science and of humanity at heart. They seek to determine the real value from a scientific standpoint of the myriad of new preparations brought to our notice. In the end their work is sure to inure to the benefit of pharmacy and medicine and of humanity.—Proc. Vermont Pharm. Ass. 1910, p. 15.

Edsall, D. L., thinks the descriptions of all reliable and not offensive remedies can be found in the Pharmacopœia or in New and Nonofficial Remedies.—Tr. Am. M. Ass., Sec. Pharm. and Therap., 1910, p. 18.

DeLorme, M. F., thinks that none of the articles admitted to "New and Nonofficial Remedies" will give up their claims to be recognized, and the list is sure to grow.—Practical Druggist, 1910, v. 28, p. 11

SYNTHETICS.

An editorial (Bull. Am. Pharm. Ass. 1910, v. 5, p. 435) states that the tar barrel seems almost as omnipotent as it is ubiquitous, but when its story is once written it will be a revelation that will shock civilization.

Keane, Charles Alexander, in a discussion of modern iatrochemistry, calls attention to some services of chemistry to pharmacotherapeutics and discusses the chemistry of many of the newer remedies.—J. Soc. Chem. Ind. 1910, v. 29, pp. 383–395.

Sajous, C. E. de M., thinks that the value of the coal tar derivatives greatly overbalances the dangers attributed to them.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 161.

An editorial (N. York M. J. 1910, v. 91, p. 865) quotes the opinion of an eminent teacher of pharmacology that medicine "having thoroughly ruined its digestion with synthetical remedies, and tested all the organs of the animal body," will return once more to vegetable drugs and employ them to a greater extent than it does at present.

Raubenheimer, Otto, states that although the market is not flooded as much as in former years with new chemical products, it is nevertheless desirable that the label on new products, used in addition to the trade-mark name, contain the chemical name and perhaps the formula and also the dose as a safeguard for physician, pharmacist, and patient.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1090.

Keane, Charles Alexander, gives the following table of the date of introduction of synthetic drugs:

1882	Kairine.
1883	Antipyrine.
1885	Urethane.
1886	Salol.
1887	Phenacetin.
	Antifebrine.
1888	Sulphonal.
1891	Guaiacol carbonate.
	Piperazine.
1892	Lactophenin.
1893	Pyramidon.
1894	Lysidin.
1897	Orthoform.
	Holocaine.
1899	Aspirin.
1902	Theobromine.
	Theophyllin.
1903	Veronal.
1904	Stovaine.
	Adrenalin.
1905	Novocaine.
	Alypin.
1907	Organo-Arsenic compounds.

—J. Soc. Chem. Ind., Lond., April 1910, v. 29, p. 394.

An unsigned note (Lancet 1910, v. 178, p. 1638) discusses the official recognition of synthetic products, as expressed by their inclusion in different pharmacopœias.

Sajous, Charles E. de M., thinks the coal tar derivatives have furnished us the only means to avoid the use of the opiates, which, notwithstanding the great service they have rendered humanity, have left in their train victims in numbers untold, and the shadows of which hover at once before the modern practitioner's mind when he is called upon to alleviate suffering.—Am. Druggist, 1910, v. 56, pp. 134–135.

An editorial (Pharm. J. 1910, v. 30 (84), p. 753) discusses the question of synthetic remedies as official substances, and quotes from a recent article in *The Lancet* on the same subject.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 604) presents the following enumeration of the new remedies included in 15 of the most widely used pharmacopœias:

Titles.	Number of pharmacopœias.
Antipyrine	15
Phenacetin	15
Salol	15
Sulfonal	15
Antipyrine salicylate	11
Acid acetylo-salicylic	7
Guaicol, carbonate	13
Dermatol	13
Hexamethylenetetramine	6
Diuretin	12
Heroin	5
Argentum proteinicum	5
Veronal	3

NEW REMEDIES.

Wilbert, M. I., points out that some criticism has been aroused in Germany by the proposed use of the full chemical name for the new additions to the German Pharmacopœia. It is proposed, for instance, that in place of the chemical name for novocaine the name æthamin be used, and for stovaine the name propamin.—Am. J. Pharm. 1910, v. 82, p. 260.

Rabow, S., asserts that in connection with the nomenclature of new remedies there has been developed a chaotic and intolerable condition that should be corrected; he calls attention to some of the objectionable features of the names now in use.—Therap. Monatsh. 1910, v. 24, pp. 96–97.

Oldberg, Oscar, thinks that a pharmaceutical nomenclature constructed without due regard for the requirements of the writers of prescriptions cannot be the best. Such titles as hexamethylenamina, methylthioninæ hydrochloridum, and sulphonethylmethanum are abominations.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 759.

Clayton, Charles, thinks that the present official names of some of the synthetic remedies are rather long and cumbersome, and it would seem that the adoption of some shorter and more easily memorized synonyms might result in their more frequent prescription.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 373.

Hallberg, C. S. N., states that the nomenclature of the synthetics is a serious problem and should receive much thought and study. It is again suggested that a systematic scheme be devised to form titles for these complex compounds on the plan followed in the last revision, which is believed to be the best solution of this perplexing question.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 764.

Gietner, Charles, reviews the synthetics of the U. S. P. VIII.—Proc. Missouri Pharm. Ass. 1910, pp. 103–105.

A review of the Ph. Germ. V calls attention to the conditions under which new remedies have been included in the Ph. Germ. V.—Pharm. Ztg. 1910, v. 55, p. 1003.

An editorial (Am. Druggist, 1910, v. 57, p. 366) points out that, in the Ph. Germ. V, registered names often figure as titles, followed by the chemical designation as a sub-title, but even in those cases where the chemical designation has been adopted, the protected name appears underneath.

Anselmino, O., states that the change in policy evidenced by the Ph. Germ. V in regard to trade names has been made necessary by the fact that present day elaboration of materia medica is being restricted to manufacturing concerns, and that it has been found desirable to compel compliance with established standards for many of the more widely used trade articles—Ber. pharm. Gesellsch. 1910, v. 20, p. 547.

Hunt, Reid, presents a table showing the extent to which pharmacopœias have recognized some of the newer remedies.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

An unsigned article (Pharm. Ztg. 1910, v. 55, pp. 603–604) presents an enumeration of the new remedies included in the several recently published pharmacopœias.

Osborne, O. T., recommends that the new Pharmacopœia contain such new drugs as have been proved of therapeutic value.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 235.

Wood, H. C., jr., asserts that progress in materia medica does not consist merely in changing our drugs; we must improve them as well. There is no reason for abandoning old and tried remedies for new substitutes, unless there is some definite evidence that the new remedy possesses more power or is free from some objection of the older one.—J. Am. M. Ass. 1910, v. 55, p. 30.

Stewart, F. E., thinks that a large part of the demand for new remedies is a fictitious demand caused by advertising.—Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 40.

Puckner, W. A., discusses the relation of the chemist to proprietary medicines.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 155–157.

The prospectus for an encyclopedia of ethical, non-official pharmaceuticals is discussed.—Am. Druggist, 1910, v. 57, p. 59.

Caverly, C. S., states that the crusade against the nostrum venders is still young and the sinners are big and powerful. Yet with a profession of pharmacy, educated and conscientious, backed up by a profession of medicine, likewise educated and honest, this whole unholy trade will ere long be driven from the reputable pharmacy.—Proc. Vermont Pharm. Ass. 1910, p. 15.

Beringer, George M., thinks that the practical pharmacist desires to have standards for all non-proprietary medicines that are frequently prescribed, as he knows only too well that, in the absence of standards and authoritative formulas, there will be no uniformity in prescriptions dispensed by different apothecaries.—Proc. New Jersey Pharm. Ass. 1910, p. 61.

Hynson, Henry P., thinks that the progress of pharmacy is greatly retarded by the duplicating of the same compound as specialties.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1233.

Wiley, Harvey W., thinks that new remedies which have not been established by long experimental use are to be looked upon with suspicion.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 602.

Edsall, D. L., reviews some of the reforms that have been accomplished and calls attention to others that are needed in pharmacotherapy.—Tr. Am. M. Ass., Sec. Pharm. and Therap., 1910, pp. 17–28.

Mossler, Gustav, discusses the testing of nonofficial preparations and presents descriptions, tests and assay methods for a number of the new remedies.—Ztschr. allg. österr. Apoth.-Ver., 1910, v. 48, p. 13 ff.

A book review calls attention to a volume by J. Lipowski on the valuation and examination of the more important new remedies.—Pharm. Zentralh. 1910, v. 51, p. 838.

Griebel, C., reports on the examination of a number of proprietary and secret remedies.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 20, pp. 500–505.

Juckenack and Grieble report the results of an examination of new remedies and proprietary medicines.—Apoth. Ztg. 1910, v. 25, pp. 54–55; 62–63.

Coblentz, V., reviews the recent progress in medicinal synthetics.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 352–353.

Riedel's Mentor (1910, pp. 1–46) presents an enumeration of some of the newer remedies.

Rabow, S., presents a review of the new remedies, specialties and patent medicines introduced in 1909.—Chem. Ztg. 1910, v. 34, pp. 201–202; 209–211.

The new remedies reported for the year 1909 are reviewed.—Nat. Druggist, 1910, v. 40, pp. 29–32.

Goldmann, F., reviews the literature relating to the more important new remedies of the year 1909.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 4–36.

Rabow, S., discusses some of the new remedies used in 1909; also presents some observations on the nomenclature of new remedies generally, and on the origin of veronal, stovaine and a few others.—Therap. Monatsh. 1910, v. 24, pp. 96–98.

Weinstein, Joseph, continues his review of the new remedies of 1908–9.—Am. Druggist, 1910, v. 56, p. 8 ff.

Lüders, R., reviews the work done in the pharmaceutical chemical industry during the year 1909.—Chem. Ztg. 1910, v. 34, pp. 633–634; 642–643; 659–660; 682–684. Also Chem. Ind. 1910, v. 33, pp. 210–216; 286–294.

A number of new remedies discussed during 1909 and 1910 are enumerated.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 128–145.

Keenan, Thomas J., reviews the new remedies of 1909–1910.—Am. Druggist, 1910, v. 56, pp. 388 ff; v. 57, pp. 7 ff., and Proc. New York Pharm. Ass. 1910, pp. 147–166.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 809), commenting on abuses in connection with the introduction of new remedies, points out that most of these remedies are simple mixtures of different medicines or are well known substances that are being introduced under short, euphonious titles.

Raubenheimer, Otto, states that the shelves in our pharmacies are continually being loaded with duplicate specialties. No sooner does one manufacturer exploit a specialty, than dozens of other manufacturers prepare and market practically the same articles, and the pharmacist to his sorrow, has to stock them all.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1090.

Annis, Roscoe M., asserts that we have at present about forty advertised nostrums or proprietaries which the physicians are prescribing and dispensing, all of which have parallels that are efficient and ethical and are similar to the advertised ones in all their important points.—Proc. Vermont Pharm. Ass. 1910, p. 64.

Tyrode, M. Vejux, asserts that there is no doubt that the flood of new remedies and combinations has its chief value in increasing the income of the manufacturers rather than advancing the art of therapeutics, for it is not so much a large number of a certain class of medicinal agents which we need, but rather a better understanding of those already known.—Boston M. & S. J. 1910, v. 163, p. 123.

Breugelmans, Daminet and Staes discuss the practice followed in various countries regarding the marketing of specialties and proprietary medicines.—Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 50–74.

Mazloum, Vitalis, presents a list of specialties showing the comparative price of the protected article and the free article.—*Ibid.* pp. 236–237.

The Brussels Congress resolved that, in the interest of public health and morals, publicity relative to pharmaceutic specialties should in each country be under effective regulation.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 296. Also Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 265–287.

An editorial (N. York M. J. 1910, v. 92, p. 728) discusses German and American ''ethics'' in regard to proprietaries, apropos of Ehrlich and ''606.''

PATENTS AND TRADE MARKS.

The Brussels Congress recommends that the professional associations of the different countries study the questions of patents and trade marks, and that these questions be made the order of the day for a future international congress.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 295. See also Drug. Circ. 1910, v. 54, p. 600.

Stewart, F. E., discusses patents and trade marks in their relation to pharmacal science and practice.—Proc. Pennsylvania Phar. Ass. 1910, pp. 45–64, 78–79. See also Proc. Am. Pharm. Ass. 1910, v. 58, pp. 648–666; Am. J. Pharm. 1910, v. 82, pp. 565–566; Bull. Am. Pharm. Ass. 1910, v. 5, p. 377.

The report of the Committee on Patents and Trade Marks reviews the patent system and discusses the trade mark question.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 548–552.

An abstract (Handbook on Patents) outlines the rights and privileges accorded by letters patent in this country.—Spatula, 1910, v. 17, pp. 93–94.

Isay is reported as discussing the desirability of product patents and concludes that the practical reasons for product patents outweigh those that have been offered in the negative.—Chem. Ztg. 1910, v. 34, p. 572.

An editorial (Bull. Am. Pharm. Ass. 1910, v. 5, p. 4) expresses the belief that the patent laws should receive persistent attention, and a desperate effort should be made to cut off the special privileges enjoyed by agents for foreign houses in this country.

Hilton, S. L., in the report of the Committee on National and State Legislation, recommends that the patent laws be amended so that a foreigner will receive no more advantages in this country than a citizen of the United States may receive in the respective foreign countries.—*Ibid.* p. 36.

An unsigned article (Nat. Druggist, 1910, v. 40, p. 435), in a discussion on the registration of the trade mark, points out that contrary to a somewhat general opinion the right to a trade mark is not obtained by registration but is acquired by adoption and use. In other words, the fact of registration has nothing whatever to do with the title to a trade mark.

A discussion of the patent and trade mark laws held by the City of Washington Branch is reported.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 10–12.

Buckley, Elton J., points out the difference between patents, trade marks and copyrights and discusses the requirements imposed for the securing of a copyright.—Rocky Mountain Druggist, 1910, v. 24, Dec., p. 19.

An editorial (Drug. Circ. 1910, v. 54, p. 450) discusses some of the problems relating to patents and trade marks and the infringement of synthetic remedy patent rights. See also N. A. R. D. Notes, 1910–11, v. 11, p. 42.

Lloyd, John Uri, expresses himself as being opposed to the granting of product patents because this practice tends to prevent the development of science and is, therefore, unfair and unjust.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 11.

An editorial (N. A. R. D. Notes, 1910, v. 10, pp. 1720–1721) comments on the infringement of patented products and the need for patent law reform.

An editorial (Pharm. Era, 1910, v. 43, p. 778) calls attention to the need for exercising care in the selection of words as trade marks.

Solis-Cohen, Solomon, discusses proprietorship in medicines and expresses the belief that patented articles of value should be standardized. Their manufacture and dispensing should be controlled by scientific and legal supervision, just as in the case of nonpatented products.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 492. See also N. York M. J. 1910, v. 91, p. 962.

Gehe & Co. (Handels-Bericht, 1910, p. 44), in commenting on the inclusion of trade marked names in the Pharmacopœia, express the belief that protected names, because of their being used as trade marks, should not be included in the Pharmacopœia, at least not in the official title.

Wiley, Harvey W., thinks that many patented articles have therapeutic value but he is uncertain as to whether or not they should ever find a place in the Pharmacopœia.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 603.

4. ANALYTICAL DATA.

Stern, E., reviews the progress made in analytical chemistry from May 1909 to December 1909, inclusive.—Fortschr. Chem. 1910, v. 2, pp. 39–48.

Stähler, A., reviews the recent literature relating to the progress of electro-analysis.—*Ibid.* pp. 215–227.

Taylor, Edward R., comments on the changes in industrial chemistry caused by electricity.—Tr. Am. Inst. Chem. Eng. 1910, v. 3, pp. 212–221.

Jeancard and Satie discuss the determination of chemical properties of essential oils.—Pharm. Era, 1910, v. 43, p. 142.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 5) express the belief that the results obtained by them in their analytical department show the absolute necessity of unceasing care in the control of drugs.

Forbes, J. Winchell, states that theoretically all chemicals turned out by manufacturers agree with the provisions of the U. S. P. Practically they do no such thing.—Midl. Drug. 1910, v. 44, p. 508.

Coblentz, Virgil, reports that under the last revision his committee examined between 1,800 and 2,000 specimens of chemicals obtained directly from the factory or purchased in the open market. In the beginning, many of them were below standard; but soon after the enactment of the food and drugs act, he found a marked change. Today less than one-tenth of one per cent of our market chemicals are below the Pharmacopœia standards.—Proc. Maine Pharm. Ass. 1910, p. 42.

Evans, J., thinks that all chemicals in the shop of the retail druggist should be qualitatively examined, not only to prove that the substance is such as the label implies, but also that it is free from the ordinary impurities.—Brit. & Col. Drug. 1910, v. 57, p. 133.

Graham, Horn and Rosengarten think that the Pharmacopœia should specify definite conditions under which the sample must be prepared for weighing.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 972. See also Bull. Am. Pharm. Ass. 1910, v. 5, p. 564.

Wulff, C., discusses the requirements for chemical preparations made by the Ph. Ital. III.—Apoth. Ztg. 1910, v. 25, pp. 895–896.

The proposed standards for chemicals discussed at the Second International Congress for the Suppression of Fraud are reprinted.—Oesterr. Chem.-Ztg. 1910, v. 13, pp. 17–19.

Mannich, C., reviews the progress made in pharmaceutical chemistry from April 1909 to March 1910, inclusive.—Fortschr. Chem. 1910, v. 2, pp. 299–305.

1. ADULTERATIONS.

Kebler, L. F., believes that the Pharmacopœia should introduce a definite maximum limit of impurities in connection with all drugs.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 593.

Seidell and Wilbert, discussing the purity rubric and the tests of the U. S. P. VIII, direct attention to the importance of an accurate description of the tests—qualitative and quantitative—for determining the purity of medicaments with the requirements of the purity rubric established as the standard.—*Ibid.* p. 227.

Kraemer, Henry, in a review of the Ph. Ndl. IV, points out that while a purity rubric is not given, the descriptions and tests are so exact as to establish a high degree of purity of the substance.—Am. J. Pharm. 1910, v. 82, p. 521.

Rusby, H. H., thinks that many articles of little therapeutic activity may, through their contained impurities, seriously affect the physical, chemical or therapeutical properties of prescriptions into which they enter, so that it becomes necessary for their purity to be safeguarded.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 440.

Hill and Umney say that, although it is of the highest importance that the official monographs should be drawn sufficiently strictly to ensure that only pure and unadulterated oils will be used in pharmacy, they feel it incumbent upon them specifically to state that the pharmacopœial monographs are not intended as a complete guide to enable the analyst to detect adulteration.—Pharm. J. 1910, v. 30 (84), p. 178. Also Chem. & Drug. 1910, v. 76, p. 271.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 27) state that improvement in general quality has been noticeable in chemical substances during the last decade, and that they rarely meet with the crude adulteration and gross impurity at one time prevalent.

Francis, J. M., reports that pharmaceutical chemicals have proved to be of distinctly better grade during the past year, and that manufacturers have shown an earnest effort to bring their products up to the standard required by the U. S. P. Where this has not been practical he has found goods so labeled as to call the attention of the purchaser to this fact.—Proc. Pennsylvania Pharm. Ass. 1910, p. 133.

Rosengarten, George D., calls attention to the difficulty of eliminating iron from "white chemicals" and points out that this element is almost always the cause of "off-color."—Am. J. Pharm. 1910, v. 82, p. 29.

Gering, H. R., thinks that the druggist is primarily at fault for not getting what he wants, and that when he gets goods marked "for technical use only" it is his duty to return them promptly.—Proc. Nebraska Pharm. Ass. 1910, p. 37.

Wiley, H. W., reports that during the past year 47,821 cases of foods and drugs were inspected at the New York laboratory; 4,014 samples were analyzed, of which 1,632, or about 40 per cent, were found to be in violation of the law. One hundred and thirty-five shipments were reshipped or destroyed, and 1,245 shipments were permitted entry after being relabeled or sorted.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

Kebler, L. F., points out that, in buying from a jobber or wholesaler with proper guarantee, the pharmacist is protected so long as the package is unbroken, but the moment he breaks that package he assumes responsibility and the jobber is released.—Proc. Maryland Pharm. Ass. 1910, p. 117.

Vanderkleed, C. E., presents the report of the committee on adulterations and points out that the results do not differ materially from those presented in former years.—Proc. Pennsylvania Pharm. Ass. 1910, pp. 131–147.

Sayre, L. E., reports that during the past year, beginning March 1909, 1127 samples of drugs have been examined in the Kansas Drug Laboratory and reported in accordance with the Kansas law to the State Board of Health. Three hundred and eighty-two of these samples were tinctures of iodine, 50 per cent of which were found below standard; 134 were essences of peppermint, 65 per cent below standard; 145 were spirits of camphor, 28 per cent below standard; 55 were tincture of ginger, 31 per cent were below standard. These 716 samples were preparations which the druggist had made, or should have made, himself.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 731.

The Committee on Adulterations presents a report on deteriorated, adulterated, and sophisticated drugs.—Proc. New York Pharm. Ass. 1910, pp. 167–170.

An editorial (Brit. & Col. Drug. 1910, v. 57, p. 2) calls attention to the 38th annual report of the Local Government Board.

2. REAGENTS.

Erculisse, P., suggests international unification in the composition of pharmacopœial reagents with a view of facilitating methods of analysis.—Compt. rend. Congr. Internat. Pharm. 1910, (Brussels, 1911), pp. 13–20. Also Brit. & Col. Drug. 1910, v. 58, p. 216; Chem. & Drug. 1910, v. 77, p. 403; Pharm. Zentralh. 1910, v. 51, p. 966.

A resolution adopted by the Tenth International Pharmaceutical Congress, held in Brussels in 1910, recommends the unification of normal solutions and reagents.—Pharm. Post, 1910, v. 43, p. 726. Also Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 290.

Eldred, Frank R., thinks that it would be well to eliminate a large number of the *pro-forma* solutions that are now given in the Pharmacopœia. He doubts very much if there is any laboratory that keeps those solutions made up and standardized. Many of them are introduced, and are used for very many assays and he thinks that instead of trying to multiply these solutions, an effort should be made to reduce the number to the lowest limit, and make those applicable to as many assays as possible, and not use a different solution for different chemicals and different assays, unless it was absolutely necessary.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 974.

Clark, A. H., reports some observations on the keeping qualities of U. S. P. volumetric solutions.—*Ibid.* pp. 976–978.

Moerk, Frank X., reviews the volumetric calculations of the U. S. P. VIII.—*Ibid.* pp. 1077–1088.

Kebler, L. F., in the report of the committee on the testing of chemical reagents, recommends, in part, that the designation "C. P." be applied only to such chemical reagents as are free from recognizable impurities.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., pp. 50–51. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Kastle, J. H., calls attention to several acids suitable for use as standards in acidimetry.—Am. Chem. J., 1910, v. 44, pp. 487–493.

Elvove, Elias, presents a note on a suitable ultimate standard for the volumetric solutions of the U. S. P. in which he recommends the use of pure metallic silver as the standard.—Am. J. Pharm. 1910, v. 82, pp. 203–211.

Horn, Graham, and Rosengarten express the belief that potassium bitartrate as the basis for alkalimetry and acidimetry is now generally being replaced by sodium oxalate, potassium tetroxalate, oxalic acid or constant boiling hydrochloric acid.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 565.

Vanderkleed, C. E., thinks it absolutely necessary to standardize solutions with the aid of the same indicator that is to be used later in the determination.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 973.

Mecklenburg, Werner, discusses the iodometric determination of potassium ferro- and ferricyanide.—Ztschr. anorg. Chem., 1910, v. 67, pp. 322–328.

See also article by Müller and Diefenthäler.—*Ibid.* pp. 418–436.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 1024) enumerates and comments on the new reagents of the Ph. Germ. V, and points out that the table of reagents, which must be kept on hand in each pharmacy, has been enlarged by the addition of 68 articles, over the similar table in the Ph. Germ. IV.

Eschbaum, F., presents a criticism of the reagents so far announced for the forthcoming Ph. Germ. V.—Ber. pharm. Gesellsch., 1910, v. 20, pp. 257–265.

Piorkowski, M., comments on the paper by Friedrich Eschbaum.—*Ibid.* pp. 264–265.

Spaeth, Ed., presents a table in which he enumerates the behavior of fruit juices toward reagents.—Pharm. Zentralh. 1910, v. 51, pp. 964–965.

Scott, Wilfred W., describes and illustrates a new reagent bottle.—J. Ind. & Eng. Chem. 1910, v. 2, p. 67.

Storm, C. G., presents a note on potassium iodide starch paper, more particularly with reference to its use in connection with the testing of explosives.—Chem. News, 1910, v. 101, p. 31.

Brown, L. A., has found that by boiling the distilled water before making up the standard solution of sodium thiosulphate the titer does not change more than four points in the third decimal, in from six to eight months.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 978–979.

3. INDICATORS.

Noyes, Arthur A., discusses the quantitative application of the theory of indicators to volumetric analysis.—J. Am. Chem. Soc. 1910, v. 32, pp. 815–861.

Vassalo, Ettore, discusses the theory of indicators according to recent investigations.—Boll. chim. farm. 1910, v. 49, pp. 345–352.

Horn, Graham and Rosengarten point out the inconsistency of standardizing a potassium hydroxide solution with phenolphthalein and then employing this volumetric solution in assays where methyl orange is recommended.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 972. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 564.

Vanderkleed, C. E., thinks it is absolutely necessary to standardize solutions with the aid of the same indicator that is to be used later in the determination.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 973.

Henderson and Forbes present observations on the estimation of the intensity of acidity and alkalinity with dinitrohydroquinone.—J. Am. Chem. Soc. 1910, v. 32, pp. 687–689.

Tizard, Henry Thomas, reports observations on the color changes of methyl-orange and methyl-red in acid solution and discusses the value of methyl-red as an indicator.—J. Chem. Soc., Lond., 1910, v. 97, pp. 2477–2490.

Graham, Horn and Rosengarten recommend the use of methyl-orange wherever possible, because this indicator can be used direct in cold solution and is not sensitive to carbonic acid, boric acid and silicic acid.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 972.

Sinnatt, Frank Sturdy, reports observations on the use of methylene blue as an indicator in iodometric titrations.—Analyst, Lond. 1910, v. 35, pp. 309–310.

Runne, E., in a further contribution on the titration of alkaloid salts by the use of Poirrier's blue as an indicator, calls attention to the article by Messner (Ztschr. ang. Chem., 1903, p. 469), who suggests the use of this indicator in alcoholic solution for quinine salts.—Apoth. Ztg. 1910, v. 25, p. 137.

Pozzi-Escot, Emm., describes a new and very sensitive indicator, dimethyl-brown.—Ann. chim. analyt. 1910, v. 15, p. 138.

Sacher, Jul. Fried., describes a sensitive indicator obtained from the rind of radishes.—Chem. Ztg. 1910, v. 34, pp. 1192–1193; 1333. See also comment by Schwertschlage.—*Ibid.* p. 1257.

Püschel, A., outlines a method for preparing a sensitive and stable solution of litmus.—Oesterr. Chem.-Ztg. 1910, v. 13, pp. 185–186.

Scheitz, Paul, discusses the nature and behavior of azolitmin, also comments on the alcohol soluble portion of litmus.—Ztschr. anal. Chem. 1910, v. 49, pp. 733–739.

Molobedzka, Kostanecki and Lampe discuss the chemistry of curcumin, and the behavior of this substance with boiling alkali solutions and with hydroxylamine.—Ber. deutsch. chem. Gesellsch. 1910, v. 43, pp. 2163–2170.

Tunmann, O., presents a table showing the amount of curcuma imported into the port of Hamburg from 1897 to 1908 and points out that, up to the year 1900, material quantities of this drug came from China, but this source of supply appears to be exhausted, and at the present time practically all of the drug comes from British India, with an unimportant portion from Cochin.—Apoth. Ztg. 1910, v. 25, p. 549.

Schneider, Albert, enumerates the microscopical characteristics of curcuma and states that this drug is not generally adulterated but is much used as an adulterant and coloring substance.—Merck's Rep. 1910, v. 19, p. 191.

LaWall and Bradshaw report finding from 6.0 to 9.2 per cent ash in turmeric.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Alcock, F. H., presents a note on turmeric and reports an examination of thirteen samples which were found to yield from 5.0 to 7.2 per cent of ash, and from 2.5 to 9.5 per cent of alcohol-soluble extract.—Year-Book of Pharmacy, 1910, pp. 369–371. Also Pharm. J. 1910, v. 31 (85), pp. 150, 173.

4. PHYSICAL CONSTANTS.

Schamelhout, A., proposes that pharmacopœias should indicate exactly the methods for the determination of physical constants; unanimously adopted by the Brussels Congress after a lively and animated discussion.—J. pharm. Anvers, 1910, v. 66, p. 675. See also Chem. & Drug. 1910, v. 77, p. 402, and Pharm. Post, 1910, v. 43, p. 726.

Lyons and Kebler point out that physical properties admit of exact scientific definition, and hence are of greater intrinsic value than sensible properties. The physical properties which are of special importance are: (1) solubility in various liquids; (2) density or specific gravity; (3) optical properties; (4) congealing and boiling points.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 779.

Rosengarten, George D., thinks that uniform methods for determining the melting and boiling points should be included in the Pharmacopœia, if these factors are to be used as a criterion of purity for many substances.—Am. J. Pharm. 1910, v. 82, p. 28.

Beringer, George M., thinks that working methods for determining the physical and chemical constants should be added to the U. S. P.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 85. See also p. 297 and Proc. Am. Pharm. Ass. 1910, v. 58, p. 539.

An editorial (Chem. & Drug. 1910, v. 77, p. 381), discussing the establishment of a standard temperature for India, states that the committee concludes that the temperature of reference for India generally might be accepted at 30°. With regard to the tropics, the committee believes that the matter is of sufficient importance to receive full discussion, and to be referred to the Royal Society for submission to the International Association of Academies, so that scientists in other tropical countries should have an opportunity of expressing their wants. The committee is desirous of obtaining the opinions of scientific workers throughout the tropics.

Davis, Oliver C. M., discusses, and figures apparatus for the determination of ebullioscopic constants for alcoholic preparations. He gives tabulated results of his determinations for a number of Ph. Brit. tinctures and spirits, and recommends the method as affording additional evidence of purity when taken in connection with specific gravity determinations.—Pharm. J. 1910, v. 30 (84), p. 4.

Jeancard and Satie discuss the determination of the chemical and physical constants of essential oils.—Am. Perf. 1910–11, v. 5, p. 158. Also Am. Druggist, 1910, v. 56, p. 40.

"L. Th. R." describes and illustrates an apparatus for determining the freezing point of materials at low temperature.—Chem. Weekblad, 1910, v. 7, pp. 1085–1087.

Lichthardt, G. H. P., thinks it would be desirable to include photographs or line drawings, showing the crystallization of the official salts and other chemicals.—Pacific Pharmacist, 1909–10, v. 4, p. 87.

SPECIFIC GRAVITY.

Lyons and Kebler think that in the description of any substance, its density rather than its specific gravity should be stated, i. e., the weight in grammes of a volume of the substance equal to that of one gramme of water at maximum density. It is a little easier, possibly, to ascertain the specific gravity of the substance, i. e. the weight of a volume equal to that of one gramme of water at the same temperature, and hence it is specific gravities rather than densities that are commonly given.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 779.

Jeancard and Satie discuss the determination of specific gravity, and express the belief that the pharmacist and industrial chemist needs to know only the first three decimals of the specific gravity because of the fact that, in the ordinary practice of laboratories, the determination of specific gravity is much more exact when made at room temperature.—Am. Druggist, 1910, v. 56, p. 40.

An unsigned article (Chem. Eng. 1910, v. 11, pp. 51–52) discusses methods for taking the specific gravity of solids and liquids.

Earl, J. C., discusses the relation of specific gravity at the melting point to constitution and presents a formula for calculating the specific gravity of any compound of carbon, hydrogen and oxygen at its melting point.—Chem. News, 1910, v. 102, p. 265.

Amann, J., outlines a rapid method for the exact determination of specific gravity of liquids by means of 2 vials.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 810-813.

Wiebelitz comments on the specific gravity requirements of the new Ph. Germ. V and asserts that throughout the book it is evident that great attention has been given to minor details and requirements, the specific gravity requirements being particularly noticeable for their accuracy.—Pharm. Ztg. 1910, v. 55, p. 1042.

Kraemer, Henry, calls attention to the fact that the Ph. Ndl. requires the specific gravity to be determined at a temperature of 15°.—Am. J. Pharm. 1910, v. 82, p. 521.

Eldred, Frank R., states that most of the specific gravity determinations reported in the literature have been made at 15°/15°, and as it is almost as easy to make the determinations at this temperature as at 25°/25°, it seems unfortunate that the Pharmacopœia has adopted the latter temperature.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 889.

The International Conference on the Unification of the Methods of Analysis of Alimentary Substances adopted a resolution that, since most of the tables of density give values obtained at 15° with reference to water at 15°, the densities should be reported conformably with these conditions (alcoholic solutions, solutions of various acids, oils, essences). The content in alcohol of alcoholic liquids should be expressed in grammes of alcohol, either per liter or per 100 cc., preferably in volumes of absolute alcohol contained in 100 volumes of the liquid analyzed.—Pharm. J. 1910, v. 31 (85), p. 675.

An abstract (Pharm. Ztg.) reprints the specific gravities included in the Ph. Germ. V.—D.-A. Apoth. Ztg. 1910–11, v. 31, p. 158.

Besson, A., describes and illustrates a new simplified pyknometer.—Chem. Ztg. 1910, v. 34, pp. 824, 932.

SOLUBILITIES.

Seidell, Atherton, points out that the physical constants of the U. S. P. are much in need of careful revision. The solubilities as stated, while interesting, are far from being correct.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 212.

Lyons and Kebler think that, in the absence of exact determination, the degree of solubility may well be indicated by the use of certain adverbs, to each of which should be attached a well defined meaning.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 779. See Bull. 79, Hyg. Lab. p. 82.

Rosengarten, George D., thinks that a careful revision of the solubility factors given in the Pharmacopœia is desirable.—Am. J. Pharm. 1910, v. 82, p. 28.

Remington, Joseph P., recommends the establishment of standard methods for solubility, melting points and other constants.—*Ibid.* p. 249.

Dohme and Engelhardt state that the Ph. Hung. III directs that for solutions the designation of 1 to 10 or 1 to 20 means that one part of the substance is dissolved in nine or nineteen parts respectively of the solvents.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1170.

The members of the New England Branch of the A. Ph. A. think that complete solubility tables of chemicals in mixtures of alcohol and water and of glycerin and water would be of much service.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 150.

Schaefer, George L., discusses the solubilities of some of the important official chemicals.—Am. J. Pharm. 1910, v. 82, pp. 218–222.

Seidell, Atherton, reports experimental determinations on the solubilities of the pharmacopœial organic acids and their salts. He outlines his experimental methods and presents his results largely in the form of tables and diagrams.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 98.

For comments see Am. J. Pharm. 1910, v. 82, p. 535; J. Am. M. Ass. 1910, v. 55, p. 1394; Chem. & Drug. 1910, v. 77, p. 624; Pharm. J. 1910, v. 31 (85), p. 461.

Jeancard and Satie state that most chemical works do not sufficiently emphasize the importance of the determination of the solubility in dilute alcohol as a means of investigation in connection with essential oils.—Pharm. Era, 1910, v. 43, p. 141.

An unsigned article (Am. Druggist, 1910, v. 56, p. 245) presents a working table of parts and percentage equivalents for guidance in making solutions.

Kahlenberg, C. (Science, 31, 41–52) reviews in a general way the history of the study of solutions, regarded as chemical compounds of indefinite composition, down to 1887, when the present physical theories of solution were brought forward by van't Hoff, Arrhenius, and Ostwald. He thinks the latter theories have outlived their usefulness, and believes that a return to the chemical view is necessary.—Chem. Abstr. 1910, v. 4, p. 977.

Jakowkin, A. A., discusses the nature of solutions and presents some additional observations on the theories of solution.—Ztschr. physikal. Chem. 1910, v. 70, pp. 158–197.

An editorial (Am. Druggist, 1910, v. 56, p. 129) points out that the word ''solution'' may be taken to mean one of many things, and calls attention to some of the theories of solution also to some of the various types of solution.

Washburn, Edward W., discusses the fundamental law for a general theory of solution.—J. Am. Chem. Soc. 1910, v. 32, pp. 653–670.

Hill, Arthur E., discusses the inconstancy of the solubility product, and concludes that it has been shown to have a value which diminishes with increase in the total concentration of electrolytes present.—*Ibid.* pp. 1186–1193.

Centnerszwer, M., discusses the critical volume and the density curves of solutions.—Ztschr. physikal. Chem. 1910, v. 69, pp. 81–89.

Tyrer, Dan, reports observations on solubilities below and above the critical temperature.—J. Chem. Soc., Lond., 1910, v. 97, pp. 621–632. See also pp. 1778–1788 and 2620–2634.

Möller, Hans Georg, presents some observations on the theory of concentrated solutions.—Ztschr. physikal. Chem. 1910, v. 69, pp. 449-459.

Sloan, W. H., reports on the conductivity of some concentrated aqueous solutions at zero.—J. Am. Chem. Soc., 1910, v. 32, pp. 946–949.

Clover and Jones report observations on the conductivities, dissociations, and temperature coefficients of conductivity between 35° and 80° of solutions of a number of salts and organic acids.—Am. Chem. J., 1910, v. 43, pp. 187–227.

Melcher, Arthur C., presents some observations on the solubility of silver chloride, barium sulphate and calcium sulphate at high temperatures.—J. Am. Chem. Soc., 1910, v. 32, pp. 50–66.

Nagel, Oskar, reports observations on dissolving chemicals and agitating solutions, in commenting on some problems in the manufacture and agitation of sulphide solutions.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 341–342.

Speranski, Alexander, reports observations on the vapor pressure of saturated solutions.—Ztschr. physikal. Chem. 1910, v. 70, pp. 519–533.

Eyre, J. Vargas, expresses the opinion that the time is not far distant when determination of solubility, as indicative of the reactivity or condition of saturation of substances, will be more generally recognized.—Chem. News, 1910, v. 102, p. 167.

Applebey, Malcom Percival, reports observations on the viscosity of salt solutions.—J. Chem. Soc., Lond., 1910, v. 97, pp. 2000–2025.

Spring, W., presents some observations on the gradual modification of the constitution of the solutions of certain salts.—Bull. Soc. chim. Belg. 1910, v. 24, pp. 109–117.

Mossler, Gustav, discusses the nature of colloidal solutions.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, pp. 65–66; 73–74.

Alexander, Jerome, in a communication on colloidal solutions and the ultramicroscope, presents a chart illustrating a classification of colloidal solutions.—Am. Druggist, 1910, v. 56, pp. 231–232.

Schoep, A., discusses the filtration of colloidal solutions, and describes and illustrates a new filter.—Bull. Soc. chim., Belg. 1910, v. 24, pp. 354–367.

Jones and Strong present an additional communication on the absorption spectra of various salts in solution, and the effect of temperature on such spectra.—Am. Chem. J. 1910, v. 43, pp. 37–90; 97–135.

Schwers, F., makes a contribution to the study of solutions: relation between density and refractive index in binary mixtures, etc.—Bull. Soc. chim. France, 1910, v. 7, pp. 875–882; 1072–1083.

Neustadt and Abegg report observations on electrochemical potentials of non aqueous solutions.—Ztschr. physikal. Chem. 1910, v. 69, pp. 486–498.

Dawson, Harry Medforth, reports observations on changes in volume in the formation of dilute solutions. The experiments reported deal with changes in volume which occur in the formation of dilute solutions of iodine and naphthalene.—J. Chem. Soc., Lond., 1910, v. 97, pp. 1041–1056.

Philip and Courtman discuss the behavior of 2 salts with a common ion, when dissolved in an organic solvent.—*Ibid.* pp. 1261–1267.

Dunstan and Thole discuss the existence of racemic compounds in solution.—*Ibid.* pp. 1249–1256.

MELTING POINT DETERMINATIONS.

Menge, G. A., discusses the U. S. P. melting point requirements, and enumerates a number of factors which are likely to cause more or less divergence in melting point values. He also outlines a method for determining melting points and presents a table showing comparative values as compiled from different sources.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1035–1043. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 212, and Am. J. Pharm. 1910, v. 82, pp. 178–187.

Remington, Joseph P., recommends the establishment of standard methods for solubilities, melting points and other constants.—Am. J. Pharm. 1910, v. 82, p. 249.

Lyons and Kebler think that the exact method for determining melting, congealing and boiling points should of course be prescribed in the Pharmacopœia.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

Vanderkleed, C. E., thinks that the new Pharmacopœia will probably describe specifically the method to be employed in determining melting points, as well as other physical constants, and this will tend to eliminate many apparent deviations from U. S. P. requirements.—Proc. Pennsylvania Pharm. Ass. 1910, p. 133.

Eldred, Frank R., states that considering the ease with which this constant can be determined, it is one of the most valuable aids in determining the identity and purity of many organic substances. He considers it essential that the Pharmacopœia should prescribe a standard form of apparatus and detailed directions for making this determination.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 888.

Riedel's Berichte (1910, p. xxv) recommends that the Pharmacopœia require the use of a larger container than a test-tube for determining the melting points, and recommends the use of a flask in connection with sulphuric acid and of a beaker in connection with paraffin.

Puckner and Hilpert report a study of the determination of melting points and point out the need for defining the method used or to be used in determining this factor.—Rep. Chem. Lab. Am. M. Ass., 1910, v. 3, pp. 116–119.

Derlin, L., comments on the determination of the boiling point and the melting point of official substances, and the desirability of outlining satisfactory methods for the determination of these two constants. He describes and illustrates a melting point apparatus according to Thiele and his proposed modification of the same.—Apoth. Ztg. 1910, v. 25, pp. 434–435.

Menge, George A., in a report of a study of melting point determinations with special reference to the requirements of the U. S. P., describes and illustrates the apparatus that has been used and outlines a proposed standard method for inclusion in the U. S. P. He also presents a table showing melting points of some pharmacopœial compounds, as given in chemical and pharmaceutical literature, also a comprehensive bibliography.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 101.

Dohme and Engelhardt state that the Ph. Hung. III directs that the melting point be determined in a manner similar to that given in the U. S. P.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1169.

Mayer, J. L., thinks that a definite statement should be given as to whether the determination of physical constants should be made with samples of chemicals as found on the market or with dried samples.—Am. Druggist, 1910, v. 57, p. 385.

Matton, K., describes and illustrates a new apparatus for the determination of the melting point.—Ztschr. ang. Chem., 1910, v. 23, p. 557. See also Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 114–115.

Weyl, Th., describes and illustrates a simple apparatus for the determination of melting points.—Chem. Ztg. 1910, v. 34, p. 488.

Richter, Ernst, comments on the melting point apparatus described by Thiele.—Apoth. Ztg. 1910, v. 25, p. 476.

Bredt, J., describes and illustrates a thermometer specially designed for determining melting points.—Chem. Ztg. 1910, v. 34, p. 221.

White, Walter P., discusses the determination of melting points, and the determination of melting points at high temperatures.—Ztschr. anorg. Chem. 1910, v. 69, pp. 305–352.

Vorländer, D., discusses the behavior of the salts of organic acids on melting, reports a number of observations with salts of potassium and sodium and presents a discussion of melting point determination by M. E. Huth.—Ber. deutsch. chem. Gesellsch. 1910, v. 43, pp. 3120–3135.

Dohme and Engelhardt state that the Ph. Hung. III directs that the congealing and melting points of fats and waxes be determined by transferring to a beaker of about 100 cc. capacity, 50 gm. of the melted and filtered mass. Then the contents of the beaker are stirred with a thermometer until a faint cloudiness appears. The temperature at which this occurs is considered as the congealing point. The contents of the beaker are then heated gradually until a clear mass is obtained. The temperature at which this takes place is considered as the melting point.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1169.

Steenbock, Harry, outlines an improvement of the Wiley method for the determining of the melting points of fats. He prepared his fat disks by dropping the melted fat on cold mercury, thus avoiding the inclusion of air bubbles.—J. Ind. & Eng. Chem. 1910, v. 2, p. 480.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 160) call attention to the doubts cast by Umney on the reliability of the solidifying point as an indication of the purity of oil of rose and oil of anise and the fact that he proposes to substitute for it the melting point as a standard of value.

BOILING POINT DETERMINATIONS.

Lyons and Kebler think that the exact method for determining melting, congealing and boiling points should of course be prescribed in the Pharmacopœia.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

A news note (Am. Druggist, 1910, v. 57, p. 384) reports that the Hygienic Laboratory at Washington is to be requested by the

Executive Committee of Revision to furnish, for the introductory chapter in the U. S. P., methods for determining the boiling points, melting points and solubility, to the end that uniformity and greater accuracy should prevail.

Eldred, Frank R., states that when a boiling point is necessary it is also important that a uniform method be followed, the methods described by Mulliken might be used.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 889.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 133) call attention to the importance of the method of determining the boiling point, particularly in connection with essential oils, and outline several precautions necessary, among others the desirability of having the entire mercury thread washed by the steam from the liquid, and the absolute necessity of avoiding the projection of the mercury bulb into the hollow of the flask or even into the liquid.

Dohme and Engelhardt state that the Ph. Hung. III directs that the boiling point be determined by a process similar to that of the U. S. P.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1169.

Riedel's Berichte (1910, p. xxv) points out that the determination of the boiling point frequently leads to differences of opinion, and outlines methods for determining boiling points at high and at low temperature.

Derlin, L., comments on the determination of the boiling point and the melting point of official substances and the desirability of outlining satisfactory methods for the determination of these two constants.—Apoth. Ztg. 1910, v. 25, pp. 433–434.

Smith and Menzies describe a method for determining under constant conditions the boiling points of even minute quantities of liquids and non-fusing solids. They also describe a common thermometric error in the determination of boiling points under reduced pressure.—J. Am. Chem. Soc. 1910, v. 32, pp. 897–907.

In a further contribution they describe a simple dynamic method, applicable to both solids and liquids for determining vapor pressures, also boiling points at standard pressures.—*Ibid.* pp. 907–914.

THERMOMETRY.

The International Conference on the Unification of the Methods of Analysis of Alimentary Substances adopted a resolution that temperature should be reported on the normal scale adopted by the General International Conference on Weights and Measures, i. e., the centigrade scale, melting ice (0°), vapor of boiling water (100°), under normal atmospheric pressure; and, as far as possible, boiling points should be indicated after the usual corrections have been made, and noted (Corr.).—Pharm. J. 1910, v. 31 (85), p. 675.

Dohme and Engelhardt state that the Ph. Hung. III directs that for measuring temperature, thermometers according to Celsius are to be used. Eighteen degrees to 20° is considered as the ordinary temperature. Digestions are to be made at 15° to 20°, and macerations at 30° to 40°. Specific gravities should be taken and reagents be made up at 15°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1170.

Raubenheimer, Otto, wishes a return to the standard temperature of 15° because of the difficulty of obtaining apparatus standardized at 25°.—Am. Druggist, 1910, v. 57, p. 385.

Engstrom, Ernst O., hopes to see the official temperature changed from 25° to 20°.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 99.

See also Hill, E. C.—*Ibid.* p. 284.

The American Pharmaceutical Association approves the recommendation; that an agreement be made between the Committee of Revision and the United States Bureau of Standards, by which a uniform official national normal, or standard, temperature shall be established for determining such constants as specific gravity and solubility, and at which apparatus should be certified.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 539.

Lyons and Kebler point out that while 25° is convenient and rational, the fact must be considered that the U. S. Bureau of Standards has adopted 20°, which is better than the 15° of Continental Europe. If the Bureau cannot be induced to see the advantage of the more radical change (to 25°), we can "compromise" on their standard, with some hope that the change will be generally adopted in America.—*Ibid.* pp. 779–780.

Davis, Charles H., does not understand why the standard temperature should ever have been raised to 77° F., and asserts that in Maine there are few days indeed when the temperature will register such a high temperature.—Proc. Maine Pharm. Ass. 1910, p. 39.

Jeancard and Satie express the belief that the choice of 25° as normal temperature is not a very fortunate one. They think it would have been preferable to keep the temperature at 15°, which is the mean temperature and that used in most determinations since the middle of the nineteenth century.—Am. Druggist, 1910, v. 56, p. 40. See also Bull. Am. Pharm. Ass. 1910, v. 5, p. 94.

Kleber, Clemens, can see no reason for objecting to the temperature specified by the U. S. P. as equivalents can be determined with ease and a temperature approaching that normally existing is to be favored.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 94.

Eldred, Frank R., thinks that it is unfortunate that the Pharmacopœia has adopted 25° as the standard temperature.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 889.

Coblentz, Virgil, thinks the suggestion that the Pharmacopœia drop the standard temperature of 25° and revert to the old 15.5°

would be a mistake, not only of policy but of practicability. Few complaints have been made, he asserts, and everybody seems satisfied with the present standard.—Proc. Maine Pharm. Ass. 1910, p. 46.

Scoville, W. L., thinks that 20° is preferable for the reason that all of the apparatus, so far as he can recall, is standardized at 20°, and for the reason that it is the temperature adopted by the Bureau of Standards at Washington, and the standard adopted by the International Society of Applied Chemistry.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 898.

Tolman, L. M., in a discussion on standardization of alcohol tables, points out that the U. S. P. Committee of Revision has prepared a table for alcohol by volume at 25°, but such a table can have only a very limited use and there seems to be no reason for making this change.—Proc. Ass. Off. Agric. Chem. 27th Ann. Conv., 1910, p. 49.—(Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137).

Waidner, C. W., reviews some of the temperature work of the Bureau of Standards.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 49–63.

POLARIZATION AND REFRACTION.

Eldred, Frank R., states that the refractive index is of value in the examination of many oils and other substances. Tables giving the refractive indices corresponding to different strengths of various pharmacopœial articles would be very useful.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 889.

Riedel's Berichte (1910, p. xxv) asserts that a polarizing apparatus has become a necessity in the pharmaceutical laboratory, and therefore recommends its inclusion in the list of apparatus necessary in the pharmacy.

Pellet, H., suggests and figures a modification of the polarimeter, to do away with the ordinary tube.—Ann. chim. analyt. 1910, v. 15, pp. 376–379.

Lyons and Kebler point out that in addition to the specific rotatory power over the polarized ray of certain organic substances, a property which enables us to discriminate between substances otherwise closely similar, and often to detect sophistications, the index of refraction of substances, particularly liquids, is a physical property occasionally of great importance. It will be well for the new committee to consider the advisability of including this among the data which should enter into a complete pharmacopœial description.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

The International Conference on the Unification of the Methods of Analysis of Alimentary Substances adopted a resolution that polarimetric deviation should be determined by means of a 23 cm. tube, at 20°, with reference to yellow light (D). For solids, the nature of the solvent and the concentration should be indicated.—Pharm. J. 1910, v. 31 (85), p. 675.

Rupe, Hans, reports observations on the influence of constitution on the optical rotatory power of optically active substances.—Ann. Chem. 1910, v. 369, pp. 311–369.

Jeancard and Satie assert that for certain essential oils, the influence of temperature on the optical rotation is not a negligible factor. They point out that it is customary to observe the optical rotation at a temperature of 20° and the U. S. P. would have done well to have allowed the observation in the case of oil of lemon and of orange to remain at the lower temperature 20°, instead of 25°.—Pharm. Era, 1910, v. 43, p. 141.

The Chemist and Druggist (July 16, 1910, p. 51) points out that the next edition of the British Pharmacopœia will probably provide refractive indices for oils and other liquids, the quality of which may be determined by examination with the refractometer, an instrument whose value in the examination of essential oils is well established. The article includes a description and illustration of the refractometer generally used.

Carr and Reynolds discuss the influence of neutralization and the influence of solvents on the specific rotatory power of alkaloids; they also discuss the modifying influence of different acidic and basic groups on the specific rotatory power of bases and acids in dry chloroform.—J. Chem. Soc., Lond., 1910, v. 97, pp. 1333–1336.

Frank-Kamenetzky, A., reports observations on the control of alcohol production by means of the saccharimeter and the immersion refractometer.—Ztschr. ang. Chem. 1910, v. 23, pp. 293–301.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 3) present a conversion table for refractive indices, showing the equivalent of the Zeiss refractometer and the oleo refractometer.

Amann, J., discusses the refractometric estimation of phosphates in urine.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 766–768.

de Fouw, C. L., reports a number of observations on the refractometer index of solutions of various official substances. Also calls attention to similar observations by B. Wagner and by J. E. Quintus Bosz.—Pharm. Weekblad, 1910, v. 47, pp. 121–125.

The International Conference on the Unification of the Methods of Analysis of Alimentary Substances adopted a resolution that the index of refraction should be expressed with reference to air, for the D ray at 25°, for fats at 40°.—Pharm. J. 1910, v. 31 (85), p. 675.

The Chemist and Druggist (1910, v. 77, p. 85) figures and describes the refractometer, the use of which will probably be prescribed by the next edition of the Ph. Brit.

Harvey and Wilkie discuss the refractive index of essential and fixed oils.—*Ibid.* v. 76, pp. 442–443.

Schimmel & Co. (Semi-Annual Report, October 1910, pp. 159–160) comment on the paper by Harvey and Wilkie and point out that the incorporation of the index of refraction among the requirements of the pharmacopœia is not to be advocated.

Gildemeister, E., in the second edition of Gildemeister and Hoffmann's Ethereal Oils, states that the refractive index is not as good a criterion of purity as are other constants. At the same time he is fully alive to the fact that there are a number of cases where the use of the refractometer may be of great service in essential oil analysis.—Chem. & Drug. 1910, v. 77, p. 518.

Lobeck, describes and illustrates a new butyrometer.—Apoth. Ztg. 1910, v. 25, p. 90.

5. APPARATUS.

Wiley, H. W., and others, in a discussion on distillation, describe and illustrate the operation of a small laboratory still. They also discuss the several types of industrial stills.—Bull. No. 130, Bur. Chem. U. S. Dept. Agric., 1910, pp. 53–69.

See also comments on the history of distillation, with illustrations.—*Ibid.* pp. 90–94.

Vollrath, F., describes and illustrates a simple distilling apparatus.—Chem. Ztg. 1910, v. 34, p. 1068.

Gawalowski, A., describes and illustrates a microdistilling apparatus.—Ztschr. anal. Chem. 1910, v. 49, pp. 744–745.

Friese, Walther, describes and illustrates a new reflux condenser.—Pharm. Zentralh. 1910, v. 51, p. 64.

Kob, Eduard, describes and illustrates a modified reflux condenser.—Chem. Ztg. 1910, v. 34, p. 116.

Hahn, Arnold, describes and illustrates a convenient condenser.—Apoth. Ztg. 1910, v. 25, p. 684.

Bloom, David, describes and illustrates a condenser used for extraction.—J. Ind. & Eng. Chem. 1910, v. 2, p. 103.

An unsigned article (Apoth. Ztg. 1910, v. 25, p. 436) describes and illustrates several forms of condensers.

Hladik, Jaroslav, describes and illustrates a practical method for vacuum evaporation.—Oesterr. Chem. Ztg. 1910, v. 13, pp. 202–203.

Sadtler, P. B., discusses the data which must be taken into account in designing apparatus for vacuum evaporation in different industries.—Chem. Eng. 1910, v. 11, pp. 11–14.

Arsem, W. C., describes and illustrates the electric vacuum furnace installations in the research laboratory of the General Electric Laboratory.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 3–9.

MacLean, M. M., describes and illustrates a convenient drying oven.—*Ibid.* pp. 480–481.

Henderson, V. E., describes and illustrates a modified Soxhlet apparatus.—*Ibid.* pp. 219–220.

A modified extraction apparatus of the Soxhlet type is described and illustrated.—Apoth. Ztg. 1910, v. 25, p. 898.

Roberts, Norman, describes and illustrates an extraction apparatus consisting of a battery of specially constructed extraction cells connected in series, together with an arrangement for evaporating, condensing and circulating volatile solvents.—Am. Chem. J. 1910, v. 43, pp. 418–424.

Greene, Charles Wilson, describes and illustrates a new form of extraction apparatus.—J. Biol. Chem. 1910, v. 7, pp. 503–507.

Prager, A., describes and illustrates an extraction apparatus.—Apoth. Ztg. 1910, v. 25, p. 314.

Bain, Samuel M., describes and illustrates an extraction apparatus designed for determining the oil content of cotton seed.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 455–457.

Clacher, W., describes and illustrates a convenient fat extraction apparatus.—Analyst, London, 1910, v. 35, p. 349.

Astruc, A., describes and figures an apparatus for lixiviation by heat.—J. pharm. et chim. 1910, v. 1, pp. 49–54.

Capillèry, E., tabulates some of his results as obtained with Astruc's apparatus.—*Ibid.* p. 54.

A modified Erlenmeyer flask, especially designed for decanting supernatant liquid is described and illustrated.—Apoth. Ztg. 1910, v. 25, p. 931.

Roberts, J. G., describes and illustrates a rack for holding separatory funnels.—Am. J. Pharm. 1910, v. 82, p. 373.

Grégoire, Ach., describes and illustrates a simple automatic washing apparatus.—Ann. chim. analyt. 1910, v. 15, p. 257.

Jacobson and Dinsmore describe and illustrate an improved siphon, which is especially adapted to extraction work with non-miscible solvents.—J. Am. Chem. Soc. 1910, v. 32, pp. 810–811.

Artmann, P., describes and illustrates a new wash bottle.—Chem. Ztg. 1910, v. 34, p. 50.

Davis, Frank M., describes and illustrates a new normal solution and reagent bottle.—J. Am. Chem. Soc. 1910, v. 32, pp. 1277–1279.

Clarke, H. H. F., describes a neat method for emptying carboys: a series of bottles connected with bent glass tubing, the last of the series being connected with a glass filter-pump, preferably Bunsen's.—Chem. News, 1910, v. 101, p. 146. See also Chem. Eng. 1910, v. 11, p. 49.

Dowzard, Edwin, describes and illustrates a modified drying tube.—Am. J. Pharm. 1910, v. 82, pp. 509–510.

Smit, W. P., describes and illustrates a method for maintaining a water bath with constant level.—Chem. Weekblad, 1910, v. 7, pp. 1019–1020.

Schmitz, L., describes and illustrates a Bunsen burner with a device for the exact regulation of gas and air.—Chem. Ztg. 1910, v. 34, p. 11. Also Apoth. Ztg. 1910, v. 25, p. 123.

Swett, Charles E., describes and illustrates a crucible with flaring rim and a suitable support that he has used for some time.—J. Ind. & Eng. Chem. 1910, v. 2, p. 67.

Katz, J., describes and illustrates a new form of crystalizing dish having a flat bottom and straight sides.—Ber. pharm. Gesellsch. 1910, v. 20, p. 528.

Voelker, August, describes and illustrates some quartz apparatus for use in the chemical laboratory.—Ztschr. ang. Chem. 1910, v. 23, pp. 1857–1861; 1874–1879.

A number of innovations in chemical apparatus are described and illustrated.—Pharm. Zentralh. 1910, v. 51, pp. 236–237, 250–251, 276–277, 384–385, 406–407, 539–540, 1040–1043.

Alexandrow, W., describes and illustrates a burette without stopcocks.—Apoth. Ztg. 1910, v. 25, p. 606.

Rose, J. D., describes and illustrates an adjustable automatic burette.—J. Am. Chem. Soc. 1910, v. 32, pp. 703–704.

Thomas, J. Bosley, describes and illustrates an automatic pipette.—J. Ind. & Eng. Chem. 1910, v. 2, p. 330.

Wulff describes and illustrates a reservoir burette.—Apoth. Ztg. 1910, v. 25, p. 1004.

Müller, Gustav, describes and illustrates a burette for pharmaceutical-chemical work.—*Ibid.* p. 264.

Rudnick, Paul, describes a modified burette for standard alkali solutions.—J. Am. Chem. Soc., 1910, v. 32, p. 971.

Guttmann, V., describes and illustrates an improved Kipp apparatus.—Apoth. Ztg. 1910, v. 25, p. 567. See also p. 921.

Dunning, James, describes and illustrates a simple and convenient hydrogen sulphide bottle.—Pharm. J. 1910, v. 30 (84), p. 668.

Nunn, Arthur W., describes and illustrates a sulphuretted hydrogen apparatus.—*Ibid.* v. 31 (85), p. 6.

Roberts, Norman, describes and illustrates a gas generator in four forms for laboratory and technical use.—Bull. No. 66, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 93–104.

Rupp, E., describes and illustrates a modified nitrometer.—Chem. Ztg. 1910, v. 34, p. 268.

Cumming, Alexander Charles, describes and illustrates gas-washing bottles with very slight resistance to the passage of a gas.—Chem. News, 1910, v. 101, p. 39.

McCrea, R. H., describes and illustrates a modified chlorine absorption apparatus.—*Ibid.* p. 77.

Tanon, L., discusses the ultra-microscope and its applications in pharmacy and medicine.—Bull. sc. pharmacol. 1910, v. 17, pp. 385–396.

An editorial (J. Ind. & Eng. Chem. 1910, v. 2, p. 497), commenting on the quality of platinum, calls attention to some of the complaints recently made.

Walker and Smither present a report on platinum laboratory utensils and outline a series of tests to be applied to platinum apparatus, particularly crucibles.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., pp. 180–181. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Blair, A. W., presents a note on the recovery of waste platinum.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 102–103.

6. FILTERS.

Eliel, Leo, thinks it would be desirable to have descriptions and tests for quality of filter paper in the U. S. P.—Proc. Pennsylvania Pharm. Ass. 1910, p. 363.

Raaschou, E., describes and illustrates a funnel designed to facilitate rapid filtration.—Ztschr. anal. Chem. 1910, v. 49, pp. 759–760.

An unsigned article (Apoth. Ztg. 1910, v. 25, p. 684) describes and illustrates a self-acting and rapid pressure filter.

An unsigned article (Chem. Ztg. 1910, v. 34, p. 587) describes and illustrates an apparatus for the continuous filtration in vacuo.

7. COLOR STANDARDS AND COLORS.

Möller, Hans-Jacob, discusses the desirability of the adoption of an international color standard for pharmaceuticals and drugs, and suggests the code of color by Klincksieck and Valette.—Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 161–170, 248. See also Ber. pharm. Gesellsch. 1910, v. 20, pp. 358–368; Pharm. Post, 1910, v. 43, pp. 777–779; Pharm. Zentralh. 1910, v. 51, pp. 1059–1063; Arch. Pharm. og. Chem. 1910, v. 17, pp. 237–246; Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 295, and Pharm. J. 1910, v. 31 (85), p. 368.

Roberts, Norman, reports some considerations on colorimetry and describes and illustrates a new colorimeter.—Bull. No. 66, Hyg. Lab., U. S. P. H. & M.-H. S. 1910, pp. 79–93.

Bobier, Maurice, describes a new laboratory colorimeter.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 480–482.

Autenrieth and Koenigsberger (Münch. med. Wochschr. 57, 999–1001) describe a new colorimeter and its application to the determination of hæmoglobin, iron, indican and creatinine.—Chem. Abstr. 1910, v. 4, p. 1829.

Lovibond, J. W., (Pottery Gaz. 35, 1269–71) describes the principles and application of the Lovibond tintometer. The same principles have now been applied to a pyrometer, for which the British, French and Belgian patents have just been issued. But scant description is given.—Chem. Abstr. 1911, v. 5, p. 227.

Knapp, Arthur W., comments on the interpretation of color values obtained by Lovibond's tintometer.—J. Soc. Chem. Ind. 1910, v. 29, pp. 1343–1344.

Luftensteiner, discusses the chemistry of the colors of drugs, drug colors and substances used in coloring medical preparations.—Pharm. Post, 1910, v. 43, pp. 509–511; 521–524; 527–532; 541–542; 549–550; 557–558; 565–568.

Curtiss, Richard Sydney, discusses some of the causes which underlie the phenomenon of color in organic compounds.—J. Am. Chem. Soc. 1910, v. 32, pp. 795–809.

Jeancard and Satie express the belief that pharmacopœial descriptions of the color of essential oils are insufficient or false, because of the simple fact that the color of many essential oils changes very rapidly with time, by reason of more or less exposure to light, and daily observations show that this color is variable for oils obtained normally. Those descriptions of color, which do not help in the determination of an oil, can therefore be well suppressed.—Am. Perf. 1910–11, v. 5, p. 141.

Lichthardt, G. H. P., asserts that syrups, elixirs and various galenicals usually differ so much in color that it would be indeed difficult to recognize them by this means. He believes an attempt should be made to have all of the preparations, no matter where dispensed, of a standard color.—Pacific Pharmacist, 1909–10, v. 4, p. 86.

Rusby, H. H., thinks that the Pharmacopœia should contain a reliable color chart, with numbers for the different colors, to which reference may be made in the text.—Drug. Circ. 1910, v. 54, p. 618.

Roberts, Norman, discusses some of the color requirements of the U. S. P. and suggests that definite color limits be officially set.—Am. J. Pharm. 1910, v. 82, pp. 166–167. See also Bull. Am. Pharm. Ass. 1910, v. 5, p. 213.

Feil, Joseph, finds that an acid solution of tincture of cudbear closely matches the tint of an iodine volumetric solution when the two liquids are compared in test tubes of the same size. He also finds that the acid solution of the tincture matches well with the stained glass known as ruby flash glass, and recommends the latter as a color standard for cudbear.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 371.

An editorial (Bull. Pharm. 1910, v. 24, p. 271), on color standards for the N. F., remarks that with the Ehrlich method and Feil's two standard colors the problem seems almost solved; of all three, the colored glass standard is perhaps the most attractive because of its simplicity.

The Baltimore Branch of the A. Ph. A. is reported as being in favor of the use of definite quantities of coloring materials made by a definite formula rather than the use of color charts or other color standards.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 18.

Kebler, Lyman F., reports the opinion that at the present time there is a tendency to eliminate all artificial coloring agents, and therefore the artificial coloring of National Formulary preparations should be discouraged.—*Ibid.* p. 147.

Spaeth, Ed., discusses the artificial coloring of foods and other articles of consumption.—Pharm. Zentralh. 1910, v. 51, pp. 467–472, 495–501, 557–560, 959–966, 987–991, 1015–1018.

Loomis, H. M., discusses the identification of food colors and presents a tentative report on the solubility and extraction of certain colors, and the color of reactions of dyed fiber and of aqueous and sulphuric acid solutions.—Circ. No. 63, Bur. Chem., U. S. Dept. Agric., 1910, pp. 69.

Paul, Marie, discusses the use of hydrogen dioxide for the detection of artificial coloring matters in certain medicaments, particularly in vegetable juices.—J. pharm. et chim. 1910, v. 1, pp. 289–292.

Mathewson, W. E., presents the referee report on cooperative work done in the determination of colors.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., pp. 52–55. (Bull. Bur. Chem., U. S. Dept. Agric. 1911, No. 137).

Vignon, Léo, discusses the diffusion power of certain artificial coloring matters; he shows that the coloring matters which are considered soluble in water form two very clear groups: those of the first group give true solutions (picric acid is a type of this group); those of the second group are, properly speaking, insoluble and form false solutions (type, Congo red).—Compt. rend. Acad. sc. 1910, v. 150, pp. 619–622; see also v. 151, pp. 72–75.

Meldola, Raphael (J. Soc. Dyers and Colourists, xxvi, No. 5) presents a paper on tinctorial chemistry, ancient and modern.—Chem. News, 1910, v. 101, pp. 270–273, 278–280.

Reichard, C., discusses the utilization of chemical color reactions and suggests the requirements that these reactions should combine intensity with clearness of color, great sensitiveness and a comparatively high degree of permanence.—Pharm. Zentralh. 1910, v. 51, pp. 607–613.

8. ANALYTICAL METHODS AND RESULTS.

Schamelhout, A., reports a study of the general principles underlying the examination of drugs and chemicals and suggests international unification of pharmacopœial methods of analyses.—Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 3–12. See also Pharm. Ztg. 1910, v. 55, p. 731; J. pharm. Anvers, 1910, v. 66, p. 675; Chem. & Drug. 1910, v. 77, p. 402, and Drug. Circ. 1910, v. 54, p. 600.

The Brussels Congress expressed the view that the Belgian Government should, in so far as possible, promote an international conference, in which practical pharmacists should be represented and which should consider the unification of methods of analysis of heroic medicaments.—J. pharm. Anvers, 1910, v. 66, p. 676.

Richardson, W. D., discusses the improvement of analytical processes and expresses the hope that various divisions of the American Chemical Society will take a prominent part in developing systematic work of this kind.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 99–100.

The Pharmaceutical Journal (1910, v. 31 (85), p. 675) prints an abstract of the resolutions adopted by the International Conference on the Unification of Methods of Analysis of Alimentary Substances.

Graham, Horn and Rosengarten think that in revising the U. S. P. the most modern and exact methods should be selected rather than those whose chief advantage is simplicity.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 971–972. See also Bull. Am. Pharm. Ass. 1910, v. 5, p. 564.

Moerk, Frank X., reviews the volumetric calculations of the U. S. P. VIII.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1077–1088.

Jeancard and Satie criticize the analytical methods of the U. S. P. VIII, in so far as they concern essential oils.—Pharm. Era, 1910, v. 43, p. 141. Also Am. Druggist, 1910, v. 56, p. 40.

Eldred, Frank R., presents some data obtained in the examination of official substances and comments on many of the official tests and methods.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 888–898.

The Chemist and Druggist (1910, v. 77, p. 898) comments on the explicit instructions given by the Ph. Germ. V with reference to the determination of physical constants and other analytical methods, the latter having been carefully revised.

Schamelhout, A., thinks that pharmacopœias should prescribe exact methods of examination so as to provide for correlating results under varying conditions.—Pharm. Ztg. 1910, v. 55, p. 731.

Graham, Horn and Rosengarten think that an endeavor should be made to reduce the number of test methods in all cases where accuracy would not be diminished.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 973. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 565.

Boley, Pierre, describes a new process for the detection of adulteration in medicinal or other substances, by the use of a Dewar's tube or a thermos bottle.—Bull. Soc. sc. et méd. d. l'Ouest, 1910, v. 19, p. 152.

Howard, Henry, presents a discussion of the heat of chemical reactions as a basis for a new analytical method.—J. Soc. Chem. Ind. 1910, v. 29, pp. 3–4.

Sadtler, Samuel S., outlines a method for the determination of moisture by distillation.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 66–67.

Haywood and Skinner present the referee report on methods of water analyses.—Proc. Ass. Off. Agric. Chem. 1910, 27th Ann. Conv., pp. 42–45. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Kirby, O. F., while performing the "film-tests" with asbestos fibres, for the identification of the volatile metals in qualitative analysis, found that asbestos treated with an aqueous solution of phosphoric acid proved itself an efficient substitute for platinum wire in flame colorations, borax bead and film tests, reduction with charcoal, etc.—Chem. News, 1910, v. 101, p. 170.

Handy, James O., describes a convenient method of refrigeration for analytical and industrial investigations at low temperatures (−75°).—J. Ind. & Eng. Chem. 1910, v. 2, pp. 92–94.

Dimroth, Otto, discusses the influence of the solvent on reaction rapidity and equation.—Ann. chem. 1910, v. 377, pp. 127–163.

Das, Tarak Nath, criticizes the usual method of washing precipitates in quantitative analysis, and notes that in dealing with precipitated oxalates of alkaline earths, he transfers the precipitate after each decantation to the filter, allowing the last drop of adhering water to run down, then washing out the precipitate into a beaker, and boiling with fresh water; and so on. Very quick and efficient washing is the result.—Chem. News, 1910, v. 101, p. 169.

Dulière, W., discusses the dangers of sulphuric acid as a desiccating agent.—Ann. pharm. Louvain, 1910, v. 16, p. 1.

Graham, Horn and Rosengarten think that volumetric methods are more rapid and more simple, only in the hands of the operator making a considerable number of assays at frequent intervals. Where a single assay must be made, and that only occasionally, these advantages are often lost on account of the deterioration of the volumetric solutions.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 972. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 564.

Riedel's Berichte (1910, p. xxv) suggests the inclusion of the equivalent weights in all cases where titration is directed, particularly titration of alkaloids.

Smith, Edgar F. (Trans. Am. Electrochem. Soc., 16, 65) presents an account of his work in connection with electrochemical analysis.—Chem. Abstr. 1910, v. 4, p. 1279.

Murray, B. L., discusses the use of electricity in pharmacopœial testing.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 965–967.

Turrentine, J. W., describes and illustrates a rotating graphite anode.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 342–345.

Moreau, B., discusses the qualitative analysis of a mixture of salts, the investigation of which is particularly difficult and in which the classical methods fail.—Bull. sc. pharmacol. 1910, v. 17, pp. 509–514.

Louïse, E., describes a new method of analysis by curves of miscibility, applied to turpentine essence, also to alcohols pure and denatured, perfume essences, oils and balsams employed in pharmacy, etc.—Compt. rend. Acad. sc. 1910, v. 150, pp. 526–528.

See also, Vèzes, M., *Ibid.* pp. 698–700.

Gowing-Scopes, L., discusses the possible uses of trichlorethylene in analytical chemistry. He points out that this extracting agent dissolves practically all organic compounds that do not contain two or more hydroxyl or carboxyl groups.—Analyst, London, 1910, v. 35, pp. 238–245.

Walpole, G. S., describes and illustrates a method of titrating physiological fluids.—J. Physiol. 1910, v. 40, No. 3, 4, p. xxvii.

Venturoli, Giuseppe, discusses the preservation of cadavers and methods for the detection of volatile poisons and alkaloids in the presence of formalin, in connection with chemico-toxicologic investigations.—Boll. Chim. farm. 1910, v. 49, pp. 129–136.

Emich discusses the advantages of microchemical analysis.—Pharm. Ztg. 1910, v. 55, p. 804.

Emich, F., reviews some of the recent literature relating to microchemistry and refers more particularly to the work done by H. Berens.—Ber. deutsch. Chem. Gesellsch. 1910, v. 43, pp. 10–45.

Novack, Harry J., reports observations on microscopic crystallization and its application to chemistry and therapeutics, and presents a number of illustrations.—Merck's Rep. 1910, v. 19, pp. 305–309.

9. CHEMICAL CONSTANTS.

Lucas and Bird outline methods for the determination of saponification value, iodine value and unsaponifiable matter.—Brit. & Col. Drug. 1910, v. 58, p. 317. Also Pharm. J. 1910, v. 31 (85), p. 472.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 3) outline their method for determining the iodine value of fats and resinous substances by the use of the Hanus iodine monobromide reagent.

The International Conference on the Unification of the Methods of Analysis of Alimentary Substances adopted a resolution that iodine and bromine values indicate the number of grammes of halogen combining with 100 gm. of product. In the case of butter and fats, the result should refer to 100 gm. of the material, and the name of the method employed should be given.—Pharm. J. 1910, v. 31 (85), p. 675.

An abstract (Bull. sc. Pharmacol. 1909, memoires origines 654) discusses the use of antipyrine in the determination of the Hübl iodine number of fatty and volatile oils.—Pharm. Zentralh. 1910, v. 51, pp. 623–624.

Dohme and Engelhardt outline the Ph. Hung. III directions for the determination of the bromine and iodine number of fats.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1170–1171.

Dorsman and van der Wielen review the methods given in the several pharmacopœias for determining the iodine number of fatty oils.—Pharm. Weekblad, 1910, v. 47, pp. 828–839.

Mayer, Friederich, outlines a method for the estimation of the acid and saponification numbers of dark oils and fats.—Chem. Ztg. 1910, v. 34, pp. 238–239.

Dohme and Engelhardt state that the Ph. Hung. III directs that in the determination of the acid number, 5.6 gm. of the fat to be examined are dissolved in 20 cc. of neutral alcohol and after the addition of a few drops of alcoholic phenolphthalein solution, titrated with tenth normal caustic alkali, until a permanent pink color is produced. The number of cc. of caustic alkali used is equivalent to the acid number.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1169.

Fachini and Dorta make a contribution to the study of the fatty acids.—Boll. chim. farm. 1910, v. 49, pp. 237–247.

Bohrisch and Kürschner discuss various methods for determining the saponification number of waxes, and present their results in the form of tables.—Pharm. Zentralh. 1910, v. 51, pp. 549–556, 588–593.

Hill and Umney, in connection with their paper on essential oils, submit processes for saponification and acetylation.—Pharm. J. 1910, v. 30 (84), p. 180. Also Chem. & Drug. 1910, v. 76, p. 271.

Greenish, H. G., commends this work and the general trend toward accurate, rather than approximate, methods. He suggests the desirability of describing in a little more detail the apparatus and conditions used.—Pharm. J. 1910, v. 30 (84), p. 181.

Jeancard and Satie discuss the determination of the chemical and physical constants of essential oils.—Am. Perf. 1910–11, v. 5, p. 158. See also Am. Druggist, 1910, v. 56, p. 41.

10. TESTS.

Evans, J., discusses the testing of drugs and the need of care on the part of the retail dealer to be assured that his drugs and preparations are of standard quality.—Brit. & Col. Drug. 1910, v. 57, p. 132.

Graham, Horn and Rosengarten discuss the chemical assays of the U. S. P. VIII and make a number of recommendations for improving them.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 970–973. Also Am. Druggist, 1910, v. 57, pp. 203–204.

Rosengarten, George D., discusses the manufacture of U. S. P. chemicals and presents some criticisms of the U. S. P. tests for the same.—Am. J. Pharm. 1910, v. 82, pp. 27–32.

Remington, Joseph P., points out that a chemical test in the Pharmacopœia today may influence millions of dollars through the enforcement of the standard by the food and drugs act throughout the country.—Am. Druggist, 1910, v. 56, p. 133. Also Midl. Drug. 1910, v. 44, p. 87.

The Medical Society of the State of New York recommends that technical chemical tests of substances be limited to those strictly necessary for identity and purity.—Drug. Circ. 1910, v. 54, p. 255.

Dunning, H. A. B., discusses the U. S. P. tests from the point of view of the retail pharmacist.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 968–970.

Beringer, George M., thinks that the pharmacopœial tests should be so harmonized as to make them applicable by retail druggists.—J. Am. M. Ass. 1910, v. 54, p. 396. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 85.

Rosengarten, George D., thinks it is necessary to have all definitions and tests made so precise that there can be no question regarding the possibility of obtaining concordant results.—Am. J. Pharm. 1910, v. 82, p. 29.

Remington, Jos. P., expresses the belief that the very best test would be none too good for the Pharmacopœia, and that now that the Pharmacopœia is the law of the land the intelligence of the drug clerk is not to be considered as a reason for limiting the nature of the assays and tests to be included in that book.—J. Am. M. Ass. 1910, v. 54, p. 396. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 87.

A news note (Am. Druggist, 1910, v. 57, p. 384) reports that the Executive Committee of Revision had agreed to use the methods of testing adopted by the Association of Official Agricultural Chemists.

Caesar & Loretz (Jahres-Ber. 1910, p. 75) express the belief that chemical tests and methods of valuation of drugs and preparations should be such that they can be carried out in the laboratory of the pharmacy with simple apparatus and utensils.

Puckner, W. A., thinks that the Pharmacopœia might well define the strength of the drug and state the method to be employed in testing it without giving the details of the process of assay—Bull. Am. Pharm. Ass. 1910, v. 5, p. 102.

Gordin, H. M., in discussing the U. S. P. methods of testing the identity and purity of pharmacopœial substances, expresses the belief that, because the physical and chemical properties of the substances are well known and are minutely described in standard works on chemistry, there is no necessity for the U. S. P. to describe them.—*Ibid.* p. 121.

Dunning, H. A. B., thinks that at times, at least, less delicate tests might be applied as preliminary measures, more delicate tests being applied subsequently, if necessary.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 969.

The American Pharmaceutical Association did not approve the recommendation, that the simplest identification tests for the needs of the pharmacist be stated first in the list of tests and be in special type.—*Ibid.* p. 539.

Murray, B. L., discusses the use of electricity in pharmacopœial testing. He asserts that electricity has proved very useful and reliable in the analysis of the chemicals of the Pharmacopœia, not to mention its applicability to the large number of chemicals used in medicine but not included in the Pharmacopœia.—*Ibid.* p. 965.

Anselmino, O., in discussing the tests required by the Ph. Germ. V points out that the essential tests are those for which the apparatus must be available in each pharmacy. Additional tests such as optical rotation have been embodied for information.—Ber. pharm. Gesellsch. 1910, v. 20, p. 538.

Richter, Ernst, commends the modified flame test for alkalies as outlined in the Ph. Germ. V.—Apoth. Ztg. 1910, v. 25, p. 476.

An editorial (Am. Druggist, 1910, v. 57, p. 126) points out that the increased demands made by the expected new edition of the German Pharmacopœia, as regards the tests for identity and purity of many preparations, will call for a display of more knowledge of recent analytical methods on the part of pharmacists, as well as of the inspectors of pharmacies.

Henderson and Forbes present observations on the estimation of the intensity of acidity and alkalinity with dinitrohydroquinone.—J. Am. Chem. Soc. 1910, v. 32, pp. 687–689.

Mossler, Gustav, discusses the testing of nonofficial preparations and presents descriptions, tests and assay methods for a number of the new remedies.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, p. 13 ff.

Seidell, Atherton, reports on the distribution of alkaloids between immiscible solvents and its bearing upon assay processes. He points out that the amount of alkaloids which goes into the chloroform layer may be only 12 to 25 times the amount remaining in the aqueous layer, thus giving the possibility of an error of 4 to 8 per cent of the actual amount present.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1031–1035.

Reichard, C., discusses the utilization of chemical color reactions and concludes by suggesting the requirements that these reactions should combine intensity with clearness of color, great sensitiveness and a comparatively high degree of permanence.—Pharm. Zentralh. 1910, v. 51, pp. 607–613.

Brunck, O., reports observations on the gas-volumetric estimation of hydrogen.—Chem. Ztg. 1910, v. 34, pp. 1313–1314, 1331–1332.

Colman, Harold G., discusses the analysis of ferrocyanides and reiterates a formerly made assertion that the Feld method of estimation gives very reliable results.—Analyst, London, 1910, v. 35, pp. 295–301.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 62) report that the purity of the finest samples of potassium ferricyanide was practically 100 per cent. A slight trace of sulphate was present at times.

Sarkar and Dutta report observations on the apparent continuous reducing action on potassium permanganate.—Ztschr. anorg. Chem. 1910, v. 67, pp. 225–233.

HALOGENS.

Marcusson and Döscher discuss the estimation of the sulphur and halogen content of organic substances.—Chem. Ztg. 1910, v. 34, pp. 417–418.

Clark, Hans Thacher, discusses the relation between reactivity and chemical constitution of certain halogen compounds.—J. Chem. Soc., Lond., 1910, v. 97, pp. 416–429.

McRae, R. H., describes and illustrates a modified chlorine absorption apparatus.—Chem. Eng. 1910, v. 11, p. 128.

Perkins, Claude C., discusses the determination of free bromine, free chlorine and of combined iodine and of oxidizing agents by means of metallic silver.—Ztschr. anorg. Chem. 1910, v. 66, pp. 432–435. Also Am. J. Sc. 1910, v. 29, pp. 338–340.

Dibdin and Cooper, discussing the colorimetric estimation of small quantities of bromine in the presence of large quantities of chlorine and small quantities of iodine, find that the color produced by adding chlorine water to acidified liquid containing bromides may be matched against a standard solution of bromide similarly treated. The error varies with the proportionate amounts of iodide in the sample. Similarly, iodine can be estimated by using bromine instead of chlorine water and standardizing with potassium iodide.—Chem. News, 1910, v. 101, p. 131.

Bray and MacKay describe a volumetric method of determining iodide in the presence of chloride, bromide or free iodine.—J. Am. Chem. Soc. 1910, v. 32, pp. 1193–1204.

Bray, W. C., presents a preliminary note on a source of error in permanganate determinations, proposed in this paper.—*Ibid.* pp. 1204–1207.

Randall, D. L., reports observations on the reaction between hydriodic acid and bromic acid in the presence of a large amount of hydrochloric acid.—*Ibid.* pp. 644–646.

Seeker and Mathewson discuss the estimation of iodine in organic compounds and its separation from other halogens and describe a method in which the iodine containing material is treated with potassium permanganate and nitric acid. The organic matter is completely decomposed and chlorine and bromine are converted into volatile products, while all of the iodine remains as iodic acid.—Circ. No. 65, Bur. Chem., U. S. Dept. Agric., 1910, pp. 5.

Elvove, Elias, presents a note on the assay of the halogen compounds of the U. S. P., with special reference to thymol iodide.—Am. J. Pharm. 1910, v. 82, pp. 403–409.

Hanzlik, Paul J., describes a method suited for the determination of large quantities of sodium iodide in animal tissues.—J. Biol. Chem. 1910, v. 7, pp. 459–464.

Hunter, Andrew, presents a method for the determination of small quantities of iodine, with special reference to the iodine content of the thyroid gland.—*Ibid.* pp. 321–349.

Riggs, Louis W., presents a second paper on the determination of iodine in protein combinations.—J. Am. Chem. Soc. 1910, v. 32, pp. 692–698.

HYDROGEN SULPHIDE.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 38) report that they find the most convenient assay of iron sulphide to consist in making use of Berger's suggestions (Bull. Soc. Chim., 1907), viz., working on 0.1 to 0.2 gm., assist the solution and oxidation with cold fuming nitric acid by adding a little potassium bromide. On evaporating to dryness with the customary precautions, oxidation to sulphate is complete. Re-evaporation on a steam bath with HCl removes all nitric acid, and the sulphate; the sulphide is then gravimetrically determined in the usual way.

SULPHUR AND SULPHATES.

Allen and Johnston discuss the exact determination of sulphur in soluble sulphates.—J. Am. Chem. Soc. 1910, v. 32, pp. 588-617.

An unsigned article (Chem. Ztg. 1910, v. 34, p. 231) describes and illustrates a simplified apparatus for the estimation of sulphur in iron according to Jenner.

Allen and Johnson discuss the exact determination of sulphur in pyrite and marcasite.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 196–203.

Kleine, A., describes and illustrates some new apparatus for the determination of sulphur and of arsenic.—Chem. Ztg. 1910, v. 34, pp. 636–637.

Schreiber, Herman, outlines a method for the determination of total sulphur in organic matter.—Circ. No. 56, Bur. Chem., U. S. Dept. Agric., 1910, pp. 9. Also J. Am. Chem. Soc., 1910, v. 32, pp. 977–985.

St. Warunis, Theodor, outlines a new method for the determination of sulphur in organic combinations.—Chem. Ztg. 1910, v. 34, pp. 1285–1286.

Marcusson and Döscher discuss the estimation of the sulphur and halogen content of organic substances.—*Ibid.* pp. 417–418.

See also under sulphur and the several sulphates.

PHOSPHORUS AND PHOSPHATES.

Wysor, R. J., discusses the determination of phosphorus retained with ferric chloride in ether separation of iron from other metals in oxidized hydrochloric acid solutions.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 45–47.

Denigès, G., calls attention to a series of sensitive reagents for phosphoric acid and phosphates.—Bull. Soc. Pharm. Bordeaux, 1910, v. 50, pp. 195–198.

Maude, A. H., discusses the gravimetric estimation of phosphates, by the method of Woy.—Chem. News, 1910, v. 101, p. 241.

Portes and Prunier discuss the differential reactions of calcic and sodic glycerophosphates and of monocalcic and sodic phosphates.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 186.

Abbott, G. A., reports a correction on the rate of hydration of pyrophosphoric acid as given in his previous article.—J. Am. Chem. Soc. 1910, v. 32, pp. 1576–1577.

NITROGEN AND NITRATES.

Hibbard, P. L., presents some notes on the determination of nitrogen by the Kjeldahl method and outlines a number of precautions to be observed.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 463–466.

Brown, J. A., in a note on the Kjeldahl estimation of nitrogen in fatty substances, suggests that to prevent the frothing which sometimes occurs in distilling off the ammonia when determining nitrogen in fatty substances, the acid contents of the flask should be diluted with about 100 cc. of water, and that 50 cc. of this should be boiled away before making alkaline and distilling.—Chem. News, 1910, v. 101, p. 131.

Cahen, Edward, reports a comparison of Pozzi-Escot's and Devarda's method for the estimation of nitrates.—Analyst, London, 1910, v. 35, pp. 307-308.

Beger, C., describes and illustrates several modifications of apparatus used in the determination of nitrogen by the Kjeldahl method.—Ztschr. anal. Chem. 1910, v. 49, pp. 427–435.

Harrison and Self present a note on Kjeldahl determinations of nitrogen.—Pharm. J. 1910, v. 31 (85), p. 4.

Heubner and Wiegner (J. Landw. 57, 385–90) describe a new distillation apparatus for the determination of nitrogen by the Kjeldahl method.—Chem. Abstr. 1910, v. 4, p. 1115.

Michel, Franz, describes and illustrates a modification of the nitrometer.—Chem. Ztg. 1910, v. 34, p. 1237.

Clarens proposes a method for the estimation of nitrates–gasometric at constant volume.—J. pharm. et chim. 1910, v. 1, pp. 589–593.

Remsen, Ira, presents an abstract of an address by Guye, who reviews the present status of the industrial fixation of nitrogen.—Am. Chem. J, 1910, v. 44, pp. 544–555.

Schmidt and Lumpp describe a new, very sensitive color reaction for the detection of nitric acid and of nitrates.—Ber. deutsch. chem. Gesellsch. 1910, v. 43, pp. 794–797.

Chamot and Pratt present a study of the phenolsulphonic acid method for the determination of nitrates in water, and discuss the composition of the yellow compound.—J. Am. Chem. Soc. 1910, v. 32, pp. 630–637.

Stewart and Greaves report observations on the influence of chlorine upon the determination of nitric nitrogen.—*Ibid.* pp. 756–757.

Salle outlines a general method for the estimation of nitrates and nitrites by conversion into ammonia through the action of two reducing agents.—Ann. chim. analyt. 1910, v. 15, p. 105.

See also C. Frabot.—*Ibid.* p. 219.

Tamayo, Alfredo Espinosa, has verified the Pozzi-Escot method of estimating nitrates in the presence of chlorates, bromates, etc., and suggests a way of eliminating ammonia salts.—*Ibid.* p. 135.

Caron and Raquet contribute a note on the Grandval-Lajoux method for the analysis of nitrates.—Bull. Soc. chim. France, 1910, v. 7, pp. 1021–1025.

Jones, C. H., reports on the determination of nitrogen, discusses the modified alkaline permanganate method and the neutral permanganate method for the determination of organic nitrogen in fertilizers and crude stock.—Proc. Ass. Off. Agric. Chem. 1910, 27th Ann. Conv., pp. 14–16. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137).

An unsigned article (J. Ind. & Eng. Chem., 1910, v. 2, pp. 546–547), in discussing laboratory methods for organic nitrogen availability, outlines the modified alkaline permanganate method as used by C. H. Jones, and the neutral permanganate method as used by J. P. Street.

Lipman, Jacob G., describes bacteriological methods for determining the available nitrogen in fertilizers.—*Ibid.* pp. 146–148.

Lenz, W., reports observations on the utilization of pure nitrogen and the production of nitrides of lithium and magnesium.—Arb. pharm. Inst. Univ. Berl. (1910), 1911, v. 8, pp. 71–74.

AMMONIA.

de Graaf, W. C., discusses the gasometric determination of ammonia by means of bromine in connection with the Kjeldahl process.—Pharm. Weekblad., 1910, v. 47, pp. 37–38.

Bartow and Harrison discuss the determination of ammonia nitrogen in water in the presence of hydrogen sulphide.—J. Am. Chem. Soc., 1910, v. 32, pp. 1256–1259.

Kober, Philip Adolph, discusses the quantitative distillation of ammonia by aeration.—*Ibid.* pp. 689–691.

Barral, Et., calls attention to a source of error in the estimation of ammonia by means of Schlœsing's apparatus, through absorption of ammonia by the tin tube of the condenser.—Bull. Soc. chim. France, 1910, v. 7, p. 8.

CARBON AND CARBONATES.

Koenig, N. A., describes and illustrates a potash bulb for the determination of carbon by combustion.—J. Ind. & Eng. Chem. 1910, v. 2, p. 66.

Stephenson, H. H., describes and illustrates a simple burette for the estimation of carbon dioxide.—Chem. News, 1910, v. 101, p. 61.

Marsden, Arthur, describes and illustrates a modification of Pettenkofer's method for carbon dioxide.—*Ibid.* p. 146.

See also Foss and Race.—*Ibid.* p. 203.

Vesterberg, Alb., reports observations on a titrimetric method for determining carbon dioxide in aqueous solution.—Ztschr. physikal. Chem. 1910, v. 70, pp. 551–568.

See also under the several carbonates.

ALKALI COMPOUNDS.

Jámbor, Josef, describes a simple method for the evaporation of large quantities of ammonium salts in the quantitative estimation of alkali metals.—Ztschr. anal. Chem. 1910, v. 49, pp. 733–734.

Roemer, H., presents a paper on the methods of analysis of potash salts, with a table of factors for calculations.—Chem. News, 1910, v. 101, pp. 54–58.

Bowser, L. T., presents a note on the speedy detection of potassium in small amounts by the use of sodium cobaltinitrite as a reagent.—J. Am. Chem. Soc., 1910, v. 32, pp. 78–79.

Shedd, O. M., reports observations on the volumetric determination of potassium by the cobalti-nitrite method.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 379–384.

Baker, E. L., presents the referee report on the determination of potash and, in the form of a table, comparative results of official, volumetric and gravimetric cobaltinitrite methods for potash determinations.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., pp. 16–25. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137).

Rohland, Paul, reports observations on the determination of potassium as potassium platinum chloride.—Ztschr. anal. Chem. 1910, v. 49, pp. 358–360.

Gaze, R., discusses the reasons for the development of the yellow color in alcoholic solutions of potassium hydrate.—Apoth. Ztg. 1910, v. 25, pp. 668–669.

See also under the several salts of alkalies.

ALKALI EARTH COMPOUNDS.

Murmann, Ernst, discusses the separation of calcium and magnesium.—Ztschr. anal. Chem. 1910, v. 49, pp. 688–698.

McCrudden, Francis H., presents a method for the quantitative separation of calcium and magnesium in the presence of phosphates and small amounts of iron, devised especially for the analysis of foods, urine and fæces. (Awarded Boylston Prize of the Harvard Medical School, January 1, 1909).—J. Biol. Chem. 1910, v. 7, pp. 83–100; 201.

Lindet and Brasart discuss the employment of phenols for the estimation of calcium and magnesium.—Ann. chim. analyt. 1910, v. 15, p. 293.

Melcher, Arthur C., reports observations on the solubility of calcium sulphate at high temperatures, also a study of the solubility relations of the three forms, gypsum, soluble anhydrite and ordinary anhydrite.—J. Am. Chem. Soc., 1910, v. 32, pp. 56–66.

Bube, Kurt, presents a report of observations on the nature and properties of magnesium ammonium phosphate.—Ztschr. anal. Chem. 1910, v. 49, pp. 525–597.

Huybrechts discusses the determination of barium and outlines the method of assay used by him.—Bull. Soc. chim. Belg. 1910, v. 24, pp. 281–283.

van't Kruys, M. J., reports observations on the quantitative estimation of barium sulphate in the presence of substances that influence the results.—Ztschr. anal. Chem. 1910, v. 49, pp. 393–419.

Parsons and Corson report observations on the solubility of barium nitrate and barium hydroxide in the presence of each other.—J. Am. Chem. Soc., 1910, v. 32, pp. 1383–1387.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 11) report that commercial samples of barium chlorate seem to attain a high degree of purity, iron and chlorides being as a rule practically absent.

Parsons and Perkins report observations on the solubility of strontium nitrate and strontium hydroxide in the presence of each other.—J. Am. Chem. Soc., 1910, v. 32, pp. 1387–1389.

ANTIMONY AND ARSENIC.

Morgan, Micklethwait and Whitby, in a contribution on organic derivatives of antimony, discuss the chemistry of tricamphorylstibine chloride and triphenylstibine hydroxynitrate and hydroxysulphate.—J. Chem. Soc., Lond., 1910, v. 97, pp. 34–37.

Palmer, Howard E., reports observations on the use of potassium ferrocyanide for the determination of arsenic, antimony and tin.—Ztschr. anorg. Chem. 1910, v. 67, pp. 317–321. Also Am. J. Sc. 1910, v. 29, pp. 399–403.

Jannasch and Seidel present observations on the quantitative volatilization of arsenic from solutions in the reduction of arsenic to arsenous chloride by means of hydrazin salts.—Ber. deutsch. chem. Gesellsch. 1910, v. 43, p. 1218.

Sanger and Boughton, for the determination of arsenic in animal tissue, distill the tissue with concentrated hydrochloric acid into concentrated nitric acid. The distillate is evaporated with sulphuric acid, and the arsenic is determined by the Gutzeit or Marsh method.—J. Biol. Chem. 1910, v. 7, p. xxxvii.

Kasarnowski, H., describes and illustrates an apparatus for the estimation of arsenic.—Chem. Ztg. 1910, v. 34, p. 299.

Kleine, A., describes and illustrates some new apparatus for the determination of sulphur and of arsenic.—*Ibid.* pp. 636–637.

Hawkins, W. D., in a contribution on the Marsh test and excess potential, discusses the quantitative determination of arsenic.—J. Am. Chem. Soc. 1910, v. 32, pp. 518–530.

Bobier, Maurice, describes and illustrates some new arrangements of the Marsh apparatus.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 477–480.

Dohme and Engelhardt point out that the Ph. Hung. III almost throughout uses Bettendorf's reagent for the detection of arsenic.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1171.

Swett, Otis D., describes and illustrates an apparatus for the determination of arsenic, adapted for use with many of the methods heretofore proposed.—J. Am. Chem. Soc., 1910, v. 32, pp. 962–965.

METALS.

Whitby, G. Stafford, discusses the solubility of insoluble and of slightly soluble salts of silver, and presents a table giving the solubility of the slightly soluble salts.—Ztschr. anorg. Chem. 1910, v. 67, pp. 107–109.

He also discusses the detection and determination of minute quantities of silver.—*Ibid.* pp. 62–64.

Rupp and Lehmann discuss the titrimetric separation of mercury and silver.—Chem. Ztg. 1910, v. 34, pp. 229–230.

Little and Cahen report observations on the separation of bismuth from lead and the analysis of bismuth-lead alloys.—Analyst, London, 1910, v. 35, pp. 301–306.

Swett, Chas. E., outlines a method for the separation of bismuth from alloys containing also lead and tin.—J. Ind. & Eng. Chem. 1910, v. 2, p. 28.

Biltz and Hödtke comment on the quantitative precipitation of iron and of copper with nitro-phenylhydroxylamine.—Ztschr. anorg. Chem. 1910, v. 66, pp. 426–431.

Uhlenhuth states that a solution of diamido-anthraquinone sulphonate in dilute alkalies forms a very delicate reagent for salts of copper.—Chem. & Drug. 1910, v. 77, p. 525.

Sanchez, Jean-A., presents a new method for the volumetric estimation of copper.—Bull. Soc. chim. France, 1910, v. 7, pp. 9–17.

Monier, Marcel, discusses the value of potassium ferrocyanide as a reagent for the detection of copper, particularly with reference to the adulteration of food stuffs.—J. pharm. Anvers, 1910, v. 66, pp. 281–290.

Benner, R. C., describes a rapid method for the electrolytic determination of copper in ores.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 195–196.

Blasdale and Cruess discuss some of the conditions affecting the electrolytic determination of copper.—J. Am. Chem. Soc. 1910, v. 32, pp. 1264–1277.

Bressanin, G., contributes a note on the volumetric determination of mercury by means of ammonia.—Boll. chim. farm. 1910, v. 49, pp. 589–591.

Puckner and Hilpert discuss the estimation of mercury in organic compounds.—J. Am. M. Ass. 1910, v. 54, p. 1154.

Hurt, H., discusses the aluminum reaction of salts of mercury that are insoluble in water.—Pharm. Zentralh. 1910, v. 51, pp. 677–678.

Skrabal, Anton, discusses the historical evolution of the titrimetric methods for determining iron.—Oesterr. Chem. Ztg. 1910, v. 13, pp. 1–3.

Hough, George J., discusses the titration of ferrous salts in the presence of hydrochloric and phosphoric acids.—J. Am. Chem. Soc. 1910, v. 32, pp. 539–540.

Erculisse, P., presents a note on the quantitative determination of a mixture of ferric salts, ferrous salts and tartrates. He concludes that the Knecht and Hilbert titanium trichloride method for the volumetric estimation of ferric salts is exact and rapid; that it permits the exact estimation of ferric salts in the presence of tartaric acid and that in consequence it permits, as does none other, the complete quantitative determination of the system ferric salt—ferrous salt—tartaric acid.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, pp. 237–245.

Karaoglanoff, Z., reports observations on the gravimetric estimation of manganese.—Ztschr. anal. Chem. 1910, v. 49, pp. 419–424.

Deiss, Eugen, discusses the estimation of manganese according to Volhard-Wolff.—Chem. Ztg. 1910, v. 34, pp. 237–238.

Harcourt, A. G. Vernon, outlines a method for the approximate estimation of small quantities of lead.—J. Chem. Soc., Lond., 1910, v. 97, pp. 841–845.

Wilkie, J. M., presents a discussion on the determination of lead in the presence of iron.—J. Soc. Chem. Ind. 1910, v. 29, pp. 7–9.

McDonnell and Roark discuss the determination of lead in lead arsenate as lead chromate.—Proc. Ass. Off. Agric. Chem., 1910, 27th

Ann. Conv., pp. 40–42. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Alvarez, E. Pinerua, discusses certain reactions for zinc, nickel and cobalt utilizable in analysis, employing as a reagent potassium cobalto-cyanide in saturated aqueous solution of sulphurous anhydride.—Ann. chim. analyt. 1910, v. 15, p. 129.

Cerdan, Angel del Campo, describes a color reaction for zinc salts, using an alcoholic or ethereal solution of resorcin.—Rép. pharm. 1910, v. 22, p. 4.

ORGANIC COMPOUNDS.

The Executive Committee of the British Pharmaceutical Conference expresses the belief that an analytical chart for the detection of the synthetic remedies would be useful.—Year-Book of Pharmacy, 1910, p. 296.

Perkins, Claude C., reports observations on the gravimetric determination of oxidizing reagents by means of metallic silver.—Am. J. Sc. 1910, v. 29, pp. 339–340.

Autenrieth and Beuttel report a number of experiments and outline methods for determining phenol, salicylalcohol, salicylic acid and *p*-oxybenzoic acid as tribromphenolbrom.—Arch. Pharm. 1910, v. 248, pp. 112–127.

Angeli and Castellana (Atti. acad. Lincei, 18, I, 376–8) discuss reactions of aldehydes, and conclude that nitrosoaldehydes, in general, react more rapidly than the simple aldehydes.—Chem. Abstr. 1910, v. 4, p. 1620.

de Stœklin, E., describes a new method for the detection of traces of alcohol, based upon his previous work with peroxidases. Combined with the method of Denigès for the detection of glycerin, it gives for this substance in particular very sure indications. He has found it of value in the examination of various pharmaceutical preparations, perfumes, macerations of animal organs, microbic extracts, erums, physiologic liquids, etc.—Compt. rend. Acad. Sc. 1910, v. 150, pp. 43–45.

Tolman, L. M., presents the report of the committee on standardization of alcohol tables, and recommends the provisional adoption of the table of the Bureau of Standards as published in Circular 52 of the Bureau of Chemistry.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., pp. 48–49. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

SUGAR.

Lemeland, P., discusses the method for the direct polarimetric estimation of saccharose in the presence of reducing sugars.—Ann. chim. analyt. Par., 1910, v. 15, pp. 415–419. Also J. Pharm. et chim. 1910, v. 2, pp. 298–308.

Herstein, B., in a contribution to the history of chemical reagents, discusses the origin of Fehling's solution.—J. Am. Chem. Soc., 1910, v. 32, pp. 779–784.

The International Conference on the Unification of the Methods of Analysis of Alimentary Substances adopted a resolution that when the nature of the sugars is not indicated, the figures should refer to grammes of glucose per 100 gm. or litre of product.—Pharm. J. 1910, v. 31 (85), p. 675.

See also under clinical tests and Saccharum.

11. CLINICAL TESTS.

Jonas, C., discusses the necessity of introducing into the curriculum of pharmaceutical schools a course in macroscopic, microscopic and chemical examination of certain natural and pathological secretions, and their clinical significance.—Compt. rend. Congr. Internat. Pharm., 1910 (Brussels, 1911), pp. 32–38. See also article by Grimbert, L., pp. 39–46. Also Pharm. Post, 1910, v. 43, pp. 687–690.

The discussion on the above paper is reprinted.—Compt. rend. Congr. Internat. Pharm., 1910 (Brussels, 1911), pp. 254–264. See also Pharm. Post, 1910, v. 43, p. 726.

The Kings County Pharmaceutical Society recommends that formulas and standards be given for bacteriological stains and reagents for clinical tests.—Drug. Circ., 1910, v. 54, p. 254. Also Am. Druggist, 1910, v. 56, p. 255.

The list of reagents and volumetric solutions to be embodied in the Ph. Germ. V for use by physicians in the examination of urine, fæces, and blood is reprinted.—Apoth. Ztg., 1910, v. 25, pp. 188–189.

The clinical tests to be included in the Ph. Germ. V are presented for discussion.—Pharm. Zentralh. 1910, v. 51, pp. 234–235 and J. Pharm. Elsass-Lothringen, 1910, v. 37, pp. 87–90.

Eschbaum, Friedrich, comments on and criticizes the proposed reagents and tests, for clinical purposes to be included in the Ph. Germ. V. He suggests a number of additional tests that might be included.—Ber. d. pharm. Gesellsch., 1910, v. 20, pp. 257–264.

Piorkowski, M., comments on the above paper and adds some further suggestions.—*Ibid.*, pp. 264–265.

A number of references on clinical tests and the reagents used will be found in Chem. Zentrlbl., Chem. Abstr., J. AM. M. Ass., and Index Medicus.

URINE.

Utz reviews the progress made in 1909 in the examination of urine.—Pharm. Post, 1910, v. 43, pp. 253–255; 265–267; 273–275; 285–286.

Richter, George, presents a brief note on the examination of urine at the bedside.—Med. Rec. N. Y. 1910, v. 77, p. 275.

Labat, A., presents a paper on the examination of urine according to the method of Joulie.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 118–126.

Reichardt, C. J., discusses the colors produced in urine on the addition of nitric acid.—Pharm. Ztg., 1910, v. 55, p. 638.

Slagle, Edgar A., describes a method of treating and preserving large quantities of urine for inorganic analysis.—J. Biol. Chem. 1910, v. 8, pp. 77–79.

Oefele describes a test for urine. He asserts that when fresh urine is shaken with methylene blue its color is uniformly blue. Decomposed urine is also colored blue but decolorizes itself rapidly on standing.—Pharm. Zentralh. 1910, v. 51, p. 703.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, p. 289) calls attention to a paper by Weiss on the permanganate or urochromogen tests for urine.

Barcroft and Straub present a paper on the secretion of urine, with a discussion on diuresis evoked by Ringer's solution, sodium chloride, caffeine, urea, etc.—J. Physiol. Lond. 1910, v. 41, pp. 145–167.

Wohlgemuth, J. (Berl. klin. Wchnschr. 1910, v. 47, No. 31) has applied the test of kidney functioning by elimination of diastase in the urine, first on dogs and then in 50 clinical cases, and finds it both reliable and accurate. It is complete in half an hour. The abstract gives further details of the method—J. Am. M. Ass., 1910, v. 55, p. 975. See also editorial Med. Rec. N. Y. 1910, v. 78, p. 451, and Lancet, 1910, v. 179, p. 1024.

Goldsborough and Ainley present a note on renal activity in pregnant and puerperal women as revealed by the phenolsulphonephthalein test, and urge great caution in its use in toxæmic cases.—J. Am. M. Ass., 1910, v. 55, pp. 2058–2060.

Desesquelle, Ed., emphasizes the necessity for a daily examination of the urine, from the third month of pregnancy.—Bull. sc. pharmacol. 1910, v. 17, Annexe, pp. 205–207.

Mouriquand and Policard summarize their observations as to the mechanism, formation and clinical significance of certain urinary cylinders [tube casts].—Compt. rend. Soc. Biol. 1910, v. 68, p. 829.

Brandeis, R., (J. med. Bordeaux, 1910, v. 40, no. 14) presents a technique for the examination of the organized elements of the urine.—Bull. sc. pharmacol. 1910, v. 17, p. 433.

Sartori, A., discusses the technique for the production of Florence crystals from human sperma.—Chem. Ztg. 1910, v. 34, pp. 513–514.

Dale, J. E., contributes a paper on the systematic examination of the urine for the rarer albuminoid bodies.—J. Am. M. Ass., 1910, v. 54, p. 207.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 64–66) calls attention to the use of acetic acid for the detection of protein substances in physiological fluids.

Popielski, L., reports observations on the blood pressure reducing properties of urine.—Zentrlbl. Physiol., 1910–11, v. 24, pp. 635–639.

Camo, J., discusses urologic coefficients and relations: nitrogen, the coefficient of Bouchard, relations of carbon and nitrogen, coefficient of oxidation of sulphur, etc., etc.—Bull. pharm. sud-est, 1910, v. 15, pp. 288–294, 333–340.

Benedict and Saiki point out that, in the estimation of purin nitrogen in urine, the tendency of the Krüger-Schmidt method to give low and irregular results may be corrected by carrying out the first precipitation in a decidedly acid solution, instead of the nearly neutral reaction which obtains in the urine. The addition, preliminary to the first precipitation, of 20 cc. of glacial acid, or an equivalent quantity of dilute acetic acid, for each 300 cc. of urine employed, is advised.—J. Biol. Chem. 1910, v. 7. p. 27.

Huguet (Fr. A. A. S.) outlines a method for the estimation of the total nitrogen in urine.—Bull. sc. pharmacol. 1910, v. 17, Annexe, p. 64.

Lemaire, Paul, points out a source of error in the estimation of total nitrogen by the sodium persulphate process; the salt should be rigidly analysed to ascertain the presence of any abnormal combined ammonia.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 306–311.

Henderson, John, reports the occurrence of a peculiar protein in the urine.—Lancent, 1910, v. 178, p. 1069.

Denigès, G., calls attention to a source of error in the determination of urinary peptones by the biuret reaction, a chromogen derived from santonin, used in certain forms of diabetes.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, p. 104.

Bernier, R., presents a method for the recognition of glycuronic acid in the urine, by means of the Tollens, naphthoresorcin, reaction.—J. pharm. et chim. 1910, v. 2, pp. 401–406.

Denigès, G., describes a color reaction for glycuronic acid; action of codeine in the presence of sulphuric acid.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, p. 292.

Bloor, W. R., outlines a colorimetric method for determination of saccharin in urine, depending on the transformation of the saccharin into what is probably phenolsulphonephthalein or sulphurein, by treatment with a phenol-sulphuric acid mixture.—J. Biol. Chem. 1910, v. 8, pp. 227–231.

Wakeman, Alfred J., suggests a modification of the above, applicable both to urine and fæces.—*Ibid.* pp. 233–236.

de Graaf, W. C., outlines a method for the detection of veronal in urine. The method involves shaking out the acidified urine with ether.—Pharm. Weekblad., 1910, v. 47, p. 39.

Menière (Bull. med. June 29, 1910) suggests a new method for the estimation of mercury in urine, with a figure of the apparatus used.—Ann. chim. analyt. 1910, v. 15, p. 422.

McCrudden, Francis H., presents a method for the quantitative separation of calcium and magnesium in the presence of phosphates and small amounts of iron, devised especially for the analysis of foods, urine, and fæces. (Awarded the Boyleston Prize of the Harvard Medical School, January 1, 1909).—J. Biol. Chem. 1910, v. 7, pp. 83–100, 201.

Smith, J. Barker, outlines a method for the rapid estimation of phosphates in urine by means of the centrifuge.—Pharm. J. 1910, v. 31, (85), p. 598.

Neuberg and Hildesheimer discuss the determination of phenols in the urine of cattle.—Biochem. Ztschr., 1910, v. 28, pp. 525–528.

Kinoshita, Tosaku, discusses the occurrence and the quantitative estimation of trimethylamine in urine.—Zentrlbl. Physiol., 1910–11, v. 24, pp. 776–779.

Erdmann, C. C., in a note on the work of Kinoshita, reports his inability to isolate appreciable amounts of trimethylamine from normal urine.—*Ibid.* p. 1105.

v. Fürth, O., in a reply to Erdmann, points out that Kinoshita's work was on abnormal and not normal human urine and that the polemic is consequently groundless.—*Ibid.* p. 1105.

de Jager, L., reports observations on the occurrence in urine of ammonia, phosphoric acid, acid bodies and amino acids.—Zentrlbl. Physiol. u. Path. d. Stffwchsls, 1910, v. 5, pp. 241–255.

Denigès, G., presents a note on certain characters and on the detection of cryogenine in the urine.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 340–342.

Royle, Elsi M., makes a preliminary report on urinalysis as an aid to diagnosis in malignant disease, with tabulated statements of results which seem to show that uric acid is higher, phosphates lower, and the ratio of phosphates to uric acid almost invariably lowered, as compared with normal.—Lancet, 1910, v. 179, pp. 450–455. See also editorial, *Ibid.* p. 502.

Williams, Evans and Glynn report a case of multiple myeloma with observations on the nature of the Bence-Jones protein found in the urine, with a reference to still another case.—Lancet, 1910, v. 179, pp. 1403–1406.

King, Roscoe W., presents a paper on the chemistry of the urine in pulmonary tuberculosis, with observations on the blood and tabulated summaries of his results.—Med. Rec. 1910, v. 78, pp. 351–357.

Ferrier, Paul, asserts that the urine reflects macroscopically the daily variations in calcification and emphasizes the importance of these observations in the treatment of tuberculosis.—Compt. rend. Soc. Biol. 1910, v. 69, p. 378.

"L. B." calls attention to the importance of the study of the urine for the diagnosis and prognosis of tuberculosis, and refers to Castaigne and Gouraud (J. méd. francaise, 1910, Jan. 15, p. 20).—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 173–175.

Holt, R. C., calls attention to the significance of a urine reaction in lobar pneumonia, a dense white or dirty white ring or haze above the junction of the acid and the urine in Heller's test.—Brit. M. J., 1910, v. 2, p. 79.

Gillman, George, describes the technique of a bedside Widal test.—Med. Rec. New York, 1910, v. 78, p. 768.

An editorial (Med. Rec. New York, v. 77, p. 410) calls attention to the report of Mandelbaum (Münch. med. Wchnschr. January 25, 1910) on a simpler typhoid test.

Berghausen, Oscar, discusses the significance of Ehrlich's aldehyde reaction in the urine, with a tabulated statement of results in 150 hospital cases. His conclusions are given at length.—J. Am. M. Ass., 1910, v. 54, pp. 99–103.

Lintz, William, presents a number of practical deductions from urinary findings in diabetes.—*Ibid.* p. 866.

Lortat-Jacob and Labbé present a note on abnormal urinary indose as an early symptom of diabetes and its diagnostic value.—Compt. rend. Soc. Biol. 1910, v. 68, p. 96.

Krause and Cramer, discussing the occurrence of creatinin in diabetic urine, note that creatin appears in the urine in all those conditions which may lead to acidosis.—J. Physiol., London, 1910, v. 40, p. lxi.

Ryffel, J. H., presents a method for the estimation of lactic acid in the urine of diabetics; the excess over the normal is of the same order as that in alimentary glycosuria, and is probably due to the same cause; a partial conversion into lactic acid of the excess of sugar in the blood.—*Ibid.* p. li.

A number of references on the analysis of urine will be found in J. Am. M. Ass., Index Medicus and Zentrlbl. Biochem. u. Biophisik.

Acidity of.—Ogden, J. Bergen, outlines Spindler's method for the determination of urinary acidity.—Boston M. & S. J., 1910, v. 163, p. 541.

Martinet, A., (Press. Méd., 1909, v. 17, No. 102) expatiates on the importance of a rapid, simple and reliable method of estimation of the acidity of the urine as a basis for treatment in various conditions, and describes the technique he prefers for the purpose.—J. Am. M. Ass., 1910, v. 54, p. 416.

Smith, J. Barker, maintains that the expression of acidity and phosphates in urine should be in terms of phosphoric anhydride (P_2O_5).—Pharm. J., 1910, v. 31 (85), p. 754.

Gaskell, J. F., discussing the ferric chloride reaction in diabetic urine, asserts that it can be taken as a measure of the acidosis present when of mild degree.—Brit. M. J., 1910, v. 1, p. 874.

Denigès, G., discusses diacetic acid and *b*-oxybutyric acid the principal tangible urinary signs of acidosis and Legal's reaction the easiest method of recognizing the condition.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 97–102. See also pp. 467–472, and 513–515.

The same author presents a brief paper on the determination of urinary acetone by distillation.—*Ibid.* pp. 102–104. Still another paper discusses the impossibility of determining urinary acetone by extraction with ether.—*Ibid.* pp. 516–520.

Barnes, A. E., discusses the clinical estimation of acidosis, and presents a modification of Folin's method.—British M. J., 1910, v. 1, p. 258.

Acetone.—Harris, Alfred, contributes a note on the occurrence of acetonuria in cases of infectious diseases.—Lancet 1910, v. 178, p. 1346. See also editorial p. 1365.

Utz calls attention to a number of articles appearing in 1909 on on the detection of acetone in urine.—Pharm. Post, 1910, v. 43, p. 273.

Imbert and Bonnamour use for the detection of acetone in urine a solution of glacial acetic acid 10 gm. in 10 cc. of a 10 per cent solution of sodium nitroprusside; 20 drops of this solution are added to 15 cc. of urine, after mixing, 20 drops of ammonia are carefully floated on the top of this; in acetonuria a violet colored disc appears at the junction of the two liquids.—Bull. sc. pharmacol. 1910, v. 17, Annexe, p. 88.

Denigès, G., comments on the importance of Legal's reaction in the recognition of diacetic acid and the impossibility of determining urinary acetone by extraction with ether.—Compt. rend. Soc. Biol. 1910, v. 69, pp. 437, 439, 441.

See also Porcher and Hervieux.—J. pharm. Anvers, 1910, v. 66, p. 63.

Gérard, E., (Nord med.) recommends for the preservation of specimens of urine a solution of thymol 10 gm. in chloroform 20 cc., of which 2 cc. may be used to the liter. This solution should not be used when it is desired to estimate the acetone. He condemns the use of formol for this purpose as it precipitates the proteins.—Bull. sc. pharmacol. 1910, v. 17, annexe, p. 64.

Albumin.—Utz calls attention to a number of articles appearing in the year 1909 on the determination of albumin.—Pharm. Post, 1910, v. 43, p. 253.

Reichard, C., discusses a number of color reactions for albumin.—Pharm. Ztg., 1910, v. 55, pp. 167–168.

Aufrecht outlines a new and rapid method for the quantitative determination of albumin in urine.—Pharm. Ztg. 1910, v. 55, pp. 345–346.

He also comments on an article by Schelenz on a rapid method for the estimation of albumin.—Pharm. Zentralh. 1910, v. 51, pp. 86–87.

Engels, Fr., (Deut. Med. Wchnschr. 1909, 2063) discusses the albumin tests used in practice.—*Ibid.* p. 8.

Christiaens, Gérard and Thomas contribute a note on a thermosoluble albumin, Bence-Jones, so-called.—J. pharm. et chim. 1910, v. 1, pp. 582–585.

Mattice, Albert F., concludes that the phosphotungstic method is very much more accurate than the Esbach, for a comparative quantitative estimation of albumin in the urine. Tsuchiya's reagent should, therefore, supplant the Esbach solution.—Arch. Int. Med. 1910, v. 5, pp. 313–324.

An editorial (J. Am. M. Ass., 1910, v. 55, p. 221) discusses methods for the quantitative estimation of albumin in the urine, and calls attention to the great value of Tscuhiya's reagent.

Boileau, A., (Bull. Soc. pharm. Bordeaux, 1909, v. 49, pp. 206–219) presents a critical study of the different reagents employed in the precipitation of urinary albumin.—Bull. sc. pharmacol. 1910, v. 17, p. 55.

Schapira, S. William, discussing the functional activities of the kidneys, concludes that little value can be placed on the presence of casts and albumin alone as evidence of kidney disease. He considers phloridzin the most accurate test for permeability of the kidneys. The relationship of tranient glycosuria to impaired kidney function when found in one kidney he thinks deserving of study and investigation.—J. Am. M. Ass. 1910, v. 54, pp. 203–205.

Gilmour, A.. contributes a brief note on albuminuria and "return" cases of scarlet fever.—British M. J., 1910, v. 1, p. 546.

See also Fletcher, James, *Ibid.*, p. 784, who presents data with reference to 2259 cases discharged in the 6 years, 1904–1909.

Ferguson, J. Newbery, reports an interesting series of observations on family albuminuria.—British M. J., 1910, v. 1, p. 689.

v. Hoesslin (Münch. med. Wchnschr., 1909, No. 43) discusses the relation between albuminuria and urinary acidity.—Nouv. remèdes, 1910, v. 26, p. 550.

Ammonia.—Tarbouriech, P. J., describes and illustrates a convenient apparatus for the estimation of ammoniacal nitrogen.—Bull. pharm. sud-est, 1910, v. 15, pp. 397–399.

Steel, Matthew, reports that further study of his method for the determination of the ammonia nitrogen in urine confirms previous results. The new method effects the liberation and collection of the entire theoretical yield of ammonia from urinary triple phosphate.—J. Biol. Chem. 1910, v. 7, p. 58.

The same author suggests an improvement of the Folin method for the determination of urinary ammonia nitrogen.—*Ibid.* v. 8, pp. 365–379.

See also Folin, Otto.—*Ibid.* p. 497.

Blood.—Fleig, C., describes a new reaction, with fluorescin, for the detection of blood, particularly in urine.—Compt. rend. Soc. Biol. 1910, v. 69, p. 192.

Bardach and Silberstein outline a method for the detection of blood with guaiacum resin with the aid of sodium perborate.—Chem. Zeit., 1910, v. 34, pp. 814–815.

Fleig, C., discusses the sensitizing agents in the phenolphthalein reaction for the detection of blood in urine (alcohol, acetic alcohol and other acid alcohols).—Compt. rend. Soc. Biol. 1910, v. 68, p. 972. Also v. 69, pp. 66, 110, 222, 539.

See also Bull. pharm. sud-est, 1910, v. 15, pp. 487–490.

Feuillié, Emile, asserts that Meyer's reaction, phenolphthalein, permits the detection of one drop of blood diluted in 10 hectolitres of water. He disagrees with some of the conclusions of Paisseau and Tixier, and makes some comments on the classification of nephritis.—Compt. rend. Soc. Biol. 1910, v. 68, p. 781.

Telmon, H., commenting on the above, calls attention to his modification of Meyer's reaction which, he says, has the maximum sensitivity.—*Ibid.* p. 950 and v. 69, p. 49.

See also Rép. pharm. 1910, v. 22, pp. 210, 487, 493–495.

Telmon and Sardou (Soc. sc. méd. Montpel. January 28, 1910) suggests a modification of Meyer's phenolphthalein reaction for the detection of blood in the urine; addition of acetic alcohol.—Ann. chim. analyt. 1910, v. 15, p. 350. Also Bull. sc. pharmacol, 1910, v. 17, p. 433.

Labat, A., notes some of the precautions to be preserved in the use of the Kastle-Meyer reaction for the detection of blood in urine.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 311–319.

Denigès, G., notes that some urines may give even an absorption band which superficially seems to resemble that of hæmoglobin. He asserts that the conditions observed afford a new reason for preferring benzidin acetate to the phenolphthalein reagent.—*Ibid.* p. 385.

Weitbrecht, W., discusses the sensitivity of several new blood tests and their application in the analysis of urine.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 589–592.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, p. 375) calls attention to a contribution by Florence (J. pharm. et chim. 1910, II, p. 160; Rép. pharm., 1910, No. 10, p. 447) who recommends the use of zinc acetate as a reagent for urobilin, urobilinogen and blood.

An editorial (Lancet, 1910, v. 179, p. 1434) comments favorably upon A. E. L. Charpentier's brochure giving a resumé of the literature on hæmoglobinuria.

Bile.—Weitz, R., discusses the employment of the different zinc salts for the recognition of urobilin, and commends the method of Schlesinger as simple, rapid, and giving highly satisfactory results.—J. pharm. et chim. 1910, v. 1, 533–538.

Florence, Albert, presents a note on a clinical reagent for urobilin and urobilinogen; and a second note on the estimation of hæmatogenous pigments.—*Ibid.* v. 2, pp. 160, 161.

An editorial (Lancet, 1910, v. 179, p. 1569) calls attention to the paper of Obermayer and Popper (Wien. med. Wchnschr. Oct. 29) dealing with the demonstration of bile pigment and its clinical significance in disease. Formulas for several test solutions and methods are given. See also Chem. Abstr., 1911, v. 5, p. 306.

Steensa, F. A., (Tijdscher. Geneesk. Nov. 20, 1909, from Sem. Méd. Ann. 1910, p. 236) suggests a modification of the Huppert-Salkowski method for the detection of biliary coloring matters in the urine.—J. pharm. et chim. 1910, v. 2, p. 130.

Denigès (Bull. Soc. pharm. Bordeaux) has adapted to the detection of biliary pigments in the urine his method for the assay of biliary calculi, based upon the employment of crystallized acetic acid as a solvent, and hydrogen peroxide or sodium nitrite as oxidizing agents.—J. pharm. Anvers, 1910, v. 66, p. 230.

Chlorides.—King, Roscoe W., outlines a method for the determination of chlorine and the purin bodies in urine.—Am. J. M. Sc. 1910, v. 140, pp. 883–886.

Harvey, Samuel Clark, in a study of the quantitative determination of the chlorides in the urine, has found that the use of an excess of nitric acid obviates some of the difficulties in connection with the Volhard method and produces results as accurate as those obtained by the usual modified Volhard method.—Arch. Int. Med. 1910, v. 6, pp. 12–18.

Indican.—Davenport, H. I., contributes brief notes on certain tests for indican in the urine.—J. Am. M. Ass., 1910, v. 55, p. 855.

Baar, G., makes a preliminary report on the clinical significance of indicanuria, based on 10,000 examinations for indican.—*Ibid.* p. 1632.

Autenrieth and Koenigsberger (Münch. med. Woch., 1910, No. 19, 1–10) describe a new colorimeter and its application to the estimation of the coloring matter of blood, iron, indican and creatinine.—J. Chem. Soc., Lond., Abstracts, 1910, v. 98, Pt. 1, p. ii, 910.

Rassler, A., (Mo. Cyc. & Med. Bull. August 1910) reports the result of his examination of 1,371 specimens of urine, and discusses the significance of red indican urine.—J. Am. M. Ass., 1910, v. 55, p. 1055.

Sulphur.—Benedict, Stanley R., contributes a note on the estimation of total sulphur in urine, a criticism of Ritson's method.—J. Biol. Chem. 1910, v. 7, p. 103; v. 8, p. 499.

Denis, W., eliminates the spattering which is so prominent a feature of the Benedict method, by the use of sodium chloride.—*Ibid.* v. 8, p. 401.

Schmidt, Carl L. A., notes that Benedict's method can be used in determining sulphur in diabetic urine but not in urine containing appreciable amounts of albumin.—*Ibid.* p. 423.

Sugar.—Utz calls attention to the literature of 1909 on the detection of sugar in urine.—Pharm. Post, 1910, v. 43, p. 265.

Herstein, B., in a contribution to the history of chemical reagents, discusses the origin of Fehling's solution.—J. Am. Chem. Soc., 1910, v. 32, pp. 779–784.

Robertson, P. Hamilton, calls attention to the fact that the addition of formalin may introduce a possible fallacy in Fehling's test for sugar.—British M. J., 1910, v. 2, p. 1164.

Tarbouriech, P. J., publishes an extensive paper on the detection and estimation of glycosuria.—Bull. pharm. sud-est, 1910, v. 15, pp. 168–176, 225–229, 581–584.

Bottu (Trib. méd. Jan. 15, 1910) describes a simple and satisfactory tube for the detection of glucose in the urine at the bedside by the production of indigo blue with ortho-nitrophenylpropiolic acid; sensitive to the extent of 1 gm. glucose per liter.—Rép. pharm. 1910, v. 22, p. 61.

Mitchell, Clifford, describes a clinical method for the identification of sugars in urine. He uses a combination of copper tests and fermentation.—Hahnemann. Month., 1910, v. 45, pp. 809–812.

Lehmann, F., discusses the quantitative estimation of sugar in urine.—Apoth. Ztg., 1910, v. 25, p. 209.

Gaebel, G. Otto, discusses the Reischauer titration method for the estimation of sugar in urine.—*Ibid.* p. 614.

Remy, Ed., discusses the reaction relation of aldehyde and ketone varieties of sugar to Fehling's solution.—*Ibid.* pp. 703–705.

Hásselbalch and Lindhard, describe a new method for the determination of sugar in urine by means of an alkaline solution of safranin.—Biochem. Ztschr., 1910, v. 27, pp. 273–295.

Wender, Neumann, comments on the methods of sugar estimation proposed by Hasselbalch and Lindhard, and calls attention to a contribution by Crismer and another by himself on similar methods.—*Ibid.* v. 28, pp. 523–524.

Hasselbalch and Lindhard reply to the criticisms by Wender.—*Ibid.* v. 29, p. 416.

Mindes, J., comments on the determination of sugar in urine by means of reagents in tablet form.—Pharm. Post, 1910, v. 43, pp. 69–70.

Goldby, F., finds the Einhorn saccharometer the simplest test for sugar in urine and the results accord fairly well with the Fehling method.—Pharm. J. 1910, v. 30 (84), p. 720.

Pollard, E. W., contributes a note on the fermentation test, with tabulated statements of results. For sugar solutions of less than one per cent he still prefers the Fehling solutions, but with stronger solutions, whereas the error with Fehling increases, he thinks, the accuracy of the fermentation process appears to increase.—*Ibid.* p. 726; see also pp. 810, and v. 31 (85), pp. 29, 61.

An abstract describes and illustrates a new form of fermentation saccharometer.—Pharm. Ztg. 1910, v. 55, p. 1048.

Andersen, A. C., reports experiments with the Bang method of sugar determination and the stability of the solutions used.—Biochem. Ztschr., 1910, v. 26, pp. 157–164.

Deval (Prog. méd. Nov. 13, 1909) describes a method for the detection and estimation of glucose in urine as glucosazone.—Rép. pharm. 1910, v. 22, p. 13.

Labat, A., suggests a somewhat similar method for lactose.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 342–344.

Müller and St. Ludwig comment on the physiological variation of sugar in urine.—Pharm. Ztg. 1910, v. 55, pp. 16–17. See also Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 203–205.

Pavy and Bywaters make a contribution on the presence of sugar in healthy urine as a source of the osazone reaction.—Brit. M. J., 1910, v. 2, p. 78. See also pp. 176, 228, 295, 353.

Rehfuss and Hawk believe with Hammarsten and Kistermann that a negative Nylander reaction affords evidence that the urine, from a clinical standpoint, may be considered sugar-free. They outline a method by which they claim the presence of mercury as mercuric chloride does not inhibit the reaction.—J. Biol. Chem. 1910, v. 7, pp. 267–286.

Urea.—Utz calls attention to articles in the literature, in 1909, on the determination of total nitrogen in urine.—Pharm. Post, 1910, v. 43, p. 273.

Mossler, Gustav, describes and illustrates a modified ureometer for the estimation of urea and presents a table for the ready determination of urea from the volume of displaced gas.—Ztschr. allg. österr. Apoth.-Ver., 1910, v. 48, pp. 1–3.

de Graaf, W. C., discusses the quantitative determination of urea using a freshly prepared sodium hypobromite solution.—Pharm. Weekblad. 1910, v. 47, p. 36.

Benedict, Stanley R., criticises the Benedict-Gephart method, and modifications, and the Folin method, and presents a new method for the determination of urea in urine.—J. Biol. Chem. 1910, v. 8, pp. 405–421.

Issaly describes and illustrates a ureometer for measuring small quantities of urea.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 270–272.

Ambard, L., discusses the relation between the proportion of urea in the blood and its elimination in the urine, giving a formula for calculation.—Compt. rend. Soc. Biol. 1910, v. 69, pp. 411, 506.

Stoepel, Paul, discusses the chemical composition of urea and related substances.—Apoth. Ztg., 1910, v. 25, pp. 129–130.

Mills, H. Brooker, emphasizes the importance of the relation between urea elimination and blood pressure and of microscopic analysis in the absence of albumin.—N. York M. J. 1910, v. 92, p. 362.

Wunder (Münch. med. Wchnschr., 1909, No. 27) presents a new method for the rapid estimation of chlorides and urea in urine.—Nouv. remèdes, 1910, v. 26, p. 258.

Ringer, W. E., reports a number of experiments on the behavior of uric acid and of sodium and potassium urates in solutions and their precipitation in solid form.—Ztschr. f. physiol. Chem., 1910, v. 67, pp. 332–403.

Cervello, C. (Arch. farmacol., 1909, v. 15, No. 3) discusses sodium phosphotungstate as a reagent for uric acid and other reducing bodies.—Nouv. remèdes, 1910, v. 26, p. 232. See also p. 528.

Rulon and Hawk report observations on the uric acid elimination following copious water drinking between meals.—J. Am. Chem. Soc., 1910, v. 32, pp. 1686–1691.

Gudzent, reports a physical chemical study of uric acid and its salts and the relation to physiology and pathology.—Zentrlbl. Physiol. u. Path. d. Stffwchsls, 1910, v. 5, pp. 289–298.

Cammidge reaction.—Cammidge and Semon describe a series of animal experiments. They found that a chronic pancreatitis caused by an ascending infection from the duodenum gave rise to a characteristic "pancreatic" reaction in the urine, but when the pancreas was extirpated at the end of the third week the reaction disappeared. Simple extirpation of the pancreas did not give rise to any urinary "pancreatic" reaction.—Brit. M. J., 1910, v. 1, p. 202.

Kinney, Lyell C., discusses the clinical value of the Cammidge reaction, which, after 15 months experience, he thinks has a very limited value.—Am. J. M. Sc. 1910, v. 140, pp. 878–883.

Swan and Gilbride present an elaborate clinical study of the Cammidge reaction in the urine.—New York M. J., 1910, v. 91, pp. 780, 852, 861.

Herschell, George, contributes a note on the pancreatic reaction in the diagnosis of duodenal ulcer.—Lancet 1910, v. 178, p. 269. See also pp. 330 and 398.

Boos and Harmer discuss the so-called Cammidge test, with notes from a number of cases.—Boston M. & S. J., 1910, v. 162, p. 821.

Hess, Otto, (Deut. Med. Wchnschr., 1910, p. 61) in a contribution on the Cammidge reaction, asserts that this reaction is by no means characteristic of disease of the pancreas, but may be used with precaution as an aid in the recognition of pancreatic disorder.—Apoth. Ztg., 1910, v. 25, p. 53.

For additional references see Chem. Abstr. and J. Am. M. Ass.

FÆCES.

Emerson, Charles P., discusses the diagnostic importance of examination of the fæces.—J. Am. M. Ass., 1910, v. 54, pp. 270–275.

Kraus, Oscar, emphasizes the importance of the examination of fæces in medical practice. He avoids as much as possible making an estimation of the gastric juice.—Lancet, 1910, v. 179, p. 95.

Howe, Rutherford and Hawk report observations on the preservation of fæces, and the desirability of making the analysis on the fresh or undried fæces for the purpose of eliminating possible loss of nitrogen.—J. Am. Chem. Soc., 1910, v. 32, pp. 1683–1686.

Hewes, Henry F., makes a contribution on the examination of the fæces in clinical work with a report of cases.—Boston M. & S. J., 1910, v. 162, pp. 101–107. For discussion see p. 115.

Gross, M., describes the quick method of examining stools, and its significance in the diagnosis and treatment of some intestinal disorders, with a number of illustrations.—Med. Rec. New York, 1910, v. 77, pp. 270–274.

Triboulet, H., comments on a source of error in the employment of phenolphthalein in the examination of the stools, a fleeting rose red.—Compt. rend. Soc. Biol. 1910, v. 69, p. 466.

Kendall and Walker outline a method for the isolation of *Bacillus dysenteriæ* from stools.—J. Med. Research 1910, v. 23, pp. 481–485.

Cammidge, P. J., presents a note on tests for occult blood in the fæces.—Brit. M. J., 1910, v. 2, p. 409.

The Editor of the Therapeutics Column (J. Am. M. Ass. 1910, v. 55, p. 218) outlines a test for blood in the fæces by the use of glacial acetic acid.

de Graaf, W. C., discusses the determination of fats and fatty acids in fæces by shaking out with ether or petroleum benzin.—Pharm. Weekblad, 1910, v. 47, pp. 39–41.

Folin and Wentworth present a new method for the determination of fat and fatty acids in fæces, based on the use of sodium alcoholate as the alkali, and certain organic solvents such as chloroform, carbon tetrachloride, benzol or toluol as solvent for the acid which is to be titrated.—J. Biol. Chem. 1910, v. 7, pp. 421–426.

Russell, William, discusses the pancreatic reaction in abdominal disease.—Brit. M. J., 1910, v. 2, pp. 5–8.

Cammidge, P. J., presents a paper on the results of the pancreatic reaction, and on the diagnostic value of an analysis of the fæces in diseases of the pancreas.—*Ibid.* pp. 8–14.

Triboulet and Trousseau (Bull. Soc. Péd. 1910, v. 12, No. 1) discuss the diagnostic importance of alkaline and acid reaction of infants' stools.—J. Am. M. Ass., 1910, v. 54, p. 1091.

Kendall and Smith outline a rapid presumptive test for diarrhœa caused by the gas bacillus.—Boston M. & S. J., 1910, v. 163, p. 578.

Triboulet, H., contributes a note on Pettenkofer's reaction, its empirical employment in clinical coprology.—Compt. rend. Soc. Biol. 1910, v. 69, p. 536.

Cuvier, J.-F., discusses a simple and practical coprologic analysis (by Schmidt).—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 68–81.

Wells, Jonathan Godfrey, presents a comparative study of the bead test of Einhorn, and the test diet for intestinal diseases of Adolf Schmidt. This method he thinks more generally applicable than the critical examination of the stools.—New York M. J., 1910, v. 91, p. 747.

Lynch, Jerome Morley, discusses the test diet nitrogen and sulphate partitions as an aid to diagnosis in intestinal disturbances.—Boston M. & S. J., 1910, v. 162, pp. 35–37.

A number of references on the analysis of fæces will be found in Zentrlbl. Biochem. u. Biophisik. 1910, v. 10.

GASTRIC CONTENTS.

Willcox, W. H., discusses the diagnostic value of the chemical analysis of the gastric contents after a test meal, with numerous tabulations.—Lancet 1910, v. 178, pp. 1119–1124.

Verbrycke, J. Russell, makes a plea for more frequent test meals in the diagnosis of stomach affections, believing that by giving due consideration to, and properly correlating all the findings, we are arriving at greater exactness, eliminating much of haphazard diagnosis and therapy and are putting the subject on a more rational basis.—New York M. J. 1910, v. 92, pp. 120–124.

Aronson, Edward A., presents a paper on the gastric secretion with analytical data from some 80 cases. He considers Congo paper hardly sensitive enough to rely upon, even for qualitative test. He uses a solution of Congo red which gives, according to Leo, a positive reaction with but 0.0009 per cent HCl.—Am. J. M. Sc., 1910, v. 139, pp. 233–237.

Tamayo, Alfredo Espinosa, suggests a method for the analysis of gastric juice which is rapid, practical and avoids certain errors of the methods ordinarily followed.—Ann. chim. analyt. 1910, v. 15, p. 172.

Denigès, G., presents a method for the rapid estimation of peptones in a test meal.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 419–421.

Kober, Lyle and Marshall note that in using the Ewald-Boas test meal, water and not tea, should be given, as an accurate qualitative and quantitative determination of blood cannot be made when either tannic or gallic acid is present.—J. Biol. Chem. 1910, v. 8, p. 95.

Weiland and Sandelowsky discuss the use of Sahli's desmoid reaction in actual practice. They describe the preparation of the reagent and the method of its use.—Therap. d. Gegenw., Berl., 1910, v. 51, pp. 255–261.

Rose, William C., presents a modified method for the clinical estimation of pepsin.—Arch. Int. Med. 1910, v. 5, pp. 459–465.

Lyle and Kober present a preliminary report on the glycyl tryptophan test for carcinoma of the stomach, with reports of 21 cases in which the method has been used with satisfaction.—New York M. J., 1910, v. 91, p. 1151.

Weinstein, J. W., discusses the new glycyltryptophan test for cancer of the stomach, with suggested improvements and with the record of some 39 cases.—J. Am. M. Ass., 1910, v. 55, pp. 1085–1091.

Wentworth, A. H., has observed (1) a constant and marked diminution of hydrochloric acid in the gastric contents from atrophic infants; (2) great variations in the quantity of hydrochloric acid in the gastric contents from well nourished infants; (3) in this series of cases of infantile atrophy, there was little, if any, increase of hydrochloric acid in the gastric juice as the result of prolonged digestion.—Arch. Int. Med. 1910, v. 6, pp. 617–625.

Einhorn, Max, describes a practical method of obtaining the duodenal contents in man, with illustrations.—Med. Rec. New York, 1910, v. 77, p. 98.

Gross, v. Oefele and Rosenberg describe the technique of examination of the duodenal contents.—*Ibid.* v. 78, p. 864.

For additional references see J. Am. M. Ass.

BLOOD.

Boycott and Chisolm outline a method for determining the alkalinity of the blood.—Biochem. J., 1910, v. 5, pp. 23–31.

Wolf and Marriot report observations on the determination of ammonia and urea in the blood.—Biochem. Ztschr., 1910, v. 26, pp. 165–170.

Reinbold, Béla, reports on some physiologically important properties of the red coloring matter of blood.—Zentrlbl. Physiol. u. Path. d. Stffwchsls, 1910, v. 5, pp. 689–700 and pp. 721–731.

Denigès, G., describes a new technique for the microcrystallographic detection of blood.—Bull. Soc. pharm., Bordeaux, 1910, v. 50, pp. 253–266.

Duke, W. W., discusses the relation of blood platelets to hæmorrhagic disease, being the description of a method for determining the bleeding time and coagulation time and a report of 3 cases of hæmorrhagic disease relieved by transfusion.—J. Am. M. Ass., 1910, v. 55, pp. 1185–1192.

Weil, Richard, presents an experimental study of the antitryptic activity of human serum.—Arch. Int. Med., 1910, v. 5, pp. 109–119. See also A. J. M. Sc. 1910, v. 139, pp. 714–725.

Bass, C. C., suggests, as a practical and inexpensive aseptic blood sticker, a straight surgical needle, stuck into the small end of the cork of a homœopathic vial which may contain alcohol or other antiseptic solution.—Med. Rec. New York, 1910, v. 78, p. 538.

Stitt, E. R., outlines a quick, simple, and accurate method of making differential blood counts in wet preparations and its advantages in the diagnosis of surgical and tropical diseases.—Philippine J. Sc. 1910, v. 5, B, pp. 233–235.

Jones, Cecil Price, points out a source of fallacy in counting red blood cells.—Brit. M. J., 1910, v. 1, p. 1351.

Morris, Roger S., presents a note on the value of Ehrlich's triacid stain in blood work. He thinks the difficulties in the use of this stain are as a rule largely magnified.—J. Am. M. Ass., 1910, v. 55, p. 501.

Wright, James Homer, presents revised directions for making and using the Wright blood-stain.—*Ibid.* p. 1979.

Lawson, George B., describes and illustrates a simple apparatus for accurately fixing blood slides by heat.—*Ibid.* p. 2299.

von Ezdorf, R. H., contributes a note on the labeling of dried blood-films. He uses a soft black lead pencil, the carbon deposit remaining permanent and not being affected by the staining and washing of the slides.—*Ibid.* v. 54, p. 125.

Sheaff, Philip Atlee, presents a simple method for the measurement of blood cells.—*Ibid.* v. 55, p. 2233.

Achard, C., describes a method of distinguishing dead from live leucocytes, which is claimed to be very simple, applicable to pathological and clinical investigation, and applies to all leucocytes, more especially the polymorphonuclears.—Brit. M. J., 1910, v. 2, p. 1416.

Gay and Lucas present a communication on methods of diagnosis of anterior poliomyelitis from spinal fluid and blood in monkeys and in human beings.—Arch. Int. Med. 1910, v. 6, pp. 330–338.

Mandelbaum, M. (Münch. med. Wchnschr. 1910, v. 57, No. 4) presents the technique of a rapid method for the early differentiation of typhoid.—J. Am. M. Ass., 1910, v. 54, p. 837.

Todd, James C., presents a paper on the value of blood cultures in the diagnosis of typhoid fever with tabulated results and his conclusions.—*Ibid.* pp. 756–759.

Burvill-Holmes, E., presents a study of the alleged presence of tubercle bacilli in the circulating blood.—Am. J. M. Sc., 1910, v. 139, pp. 99–105. See also New York M. J., 1910, v. 91, pp. 737–739.

An editorial (Med. Rec. New York, v. 77, p. 155) on tubercle bacilli in the blood refers particularly to the work of Rosenberger and Burville-Holmes.

Clifford, A. N. (U. S. N.), asserts that acid fast organisms, other than tubercle bacilli are rarely met with in clinical laboratory work, and are a neglible factor in staining for tubercle bacilli.—New York M. J., 1910, v. 91, pp. 740–742.

Schultz, W. (Berl. klin. Wchnschr., 1910, v. 47, No. 12) describes a method for the determination of the coagulating power of the blood by the use of capillary tubes.—J. Am. M. Ass., 1910, v. 54, p. 1584.

Rudolph, Robert Dawson, presents a clinical method of estimating the coagulation time of the blood.—Am. J. M. Sc. 1910, v. 140, pp. 807–815. See also J. Am. M. Ass., 1910, v. 54, p. 1892.

Bartlett and Goldberg present a medicolegal study of blood spots.—Arch. Int. Med. 1910, v. 5, pp. 217–231.

Bordas, F., presents a medicolegal study of the benzidine reaction in the identification of blood stains.—Ann. chim. analyt. 1910, v. 15, p. 261. See also Compt. rend. Acad. sc. 1910, v. 150, pp. 562–564.

Denigès, G., presents a note on presumptive evidence of the presence of blood in suspected stains.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 337–339.

Gigli, T., presents a note on benzidin as a reagent for the recognition of blood stains.—Boll. chim. farm. 1910, v. 49, p. 955.

SPUTUM.

Falk, Fritz, reports on the chemistry of sputum and presents a list of literature pertaining to the subject.—Ergeb. d. Physiol., 1910, v. 9, pp. 406–432.

Mongour and Darrasse think the albumin sputum reaction, proposed by Roger and Levy-Valensi, interesting and of real service to a physician who has not a laboratory at his disposal.—Compt. rend. Soc. Biol. 1910, v. 68, p. 689. See also Bull. Soc. pharm. Bordeaux, 1910, v. 50, p. 276.

Vallee and Finzi contribute a note on the precipitin diagnosis of tuberculosis and the properties of the serum of the horse, hyperimmunized against this infection.—Compt. rend. Soc. Biol. 1910, v. 68, p. 259; also p. 357.

Goodman, Edward H., describes a method of examining sputa for tubercle bacilli.—New York, M. J. 1910, v. 92, p. 27.

An editorial (J. Am. M. Ass., 1910, v. 54, p. 470) calls attention to the work of Falk and Tedesko, on the differential diagnosis of pulmonary and bronchial affections by means of a new sputum test based upon the absorption and elimination of salicylic acid.

Brown and Smith discuss the cultivation of tubercle bacilli directly from sputum by the use of antiformin, which consists of equal parts of Javelle water and a 15 per cent watery solution of sodium hydrate.—J. Med. Research 1910, v. 22, pp. 517–527. See also Paterson, Robert C., *Ibid.*, pp. 315–329.

Inman, A. C., discusses the specific diagnosis of pulmonary tuberculosis, summarizes the observations of others, and recommends the antiformin method of Uhlenhuth and Xylander as superior to all.—Lancet, 1910, v. 179, pp. 1747–1753. See also editorial, *Ibid.* p. 1782.

STAINS.

Tint and Bresskman contribute a study of acid-fast and acid-semifast tubercle bacilli (human): their relation in pure cultures.—J. Am. M. Ass., 1910, v. 54, p. 1591.

Rosenberger, Randle C., makes a communication on the presence of acid fast bacteria in distilled water.—New York M. J., 1910, v. 91, p. 105.

Proescher, Frederic, details a simplified method of staining fuchsinophile and gramophile forms of tubercle bacilli.—New York M. J., 1910, v. 91, p. 896.

Rulison, Elbert T., presents a new method of demonstrating the capsules of bacteria.—J. Am. M. Ass., 1910, v. 54, p. 1426.

Emmons, A. B., discusses the diagnostic value of the search for *Spirochæta pallida* in the umbilical cord of the newborn, with a report of 15 cases.—Boston M. & S. J., 1910, v. 162, p. 640.

Ghoreyeb, Albert A. W., describes, with illustrations, a new and quick method for staining spirochetes (treponemata) in smear preparations.—J. Am. M. Ass., 1910, v. 54, p. 1498.

Wood, Francis C., describes a convenient stain for the *Spirochæta pallida*.—*Ibid.* v. 55, p. 2171.

Scholtz, W., (Deut. med. Wchnschr. 1910, v. 36, No. 5) reports favorable results from the use of the India ink method in the microscopic diagnosis of syphilis. The spirochetes show up in well made India ink specimens as clearly as with the ultra-microscope.—J. Am. M. Ass., 1910, v. 54, p. 918.

Barach, Joseph H., sounds a warning against the India ink method for the *Spirochæta pallida*.—*Ibid.* v. 55, p. 1892. See also p. 2080.

Ragland, D. C., (Southern California Pract., June 1910) outlines the technique for the differential stain for diphtheria bacilli.—*Ibid.* p. 254.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 250–251) calls attention to a paper by Sommerfeld (Deut. med. Woch., 1910, No. 11, p. 505) on a simple method of staining diphtheria bacilli.

Smith, William H., describes a method of staining capsulated bacteria in body fluids.—Boston M. & S. J., 1910, v. 163, p. 791.

Strouse, S., presents a rapid stain for frozen sections.—J. Am. M. Ass., 1910, v. 54, p. 1614. See also p. 1885.

Loyez, Marie, contributes a note on the staining of nerve fibers with iron-hæmatoxylin after imbedding in celloidin.—Compt. rend. Soc. Biol. 1910, v. 69, p. 511.

Nageotte, J., comments on the above and thinks that the hæmatin method presents still further advantages over that suggested.—*Ibid.* p. 517.

DeWitt, Lydia M., presents some observations on phenol as a clearing agent in histologic work.—J. Med. Research 1910, v. 23, pp. 369–376.

CULTURE MEDIA.

Frouin, Albert, concludes that in organic media of simple constitution, the presence of the element phosphorus is necessary for the development of microbes.—Compt. rend. Soc. Biol. 1910, v. 68, p. 801.

He also presents a formula for a culture medium for tubercle bacilli containing glucosamine and sarcosine.—*Ibid.* p. 915.

Thompson, E. T., presents a note on desiccated culture media.—Lancet 1910, v. 178, p. 1411.

Remlinger, P., recommends the use of bouillon cubes in bacteriological technique.—*Ibid.* v. 69, p. 413.

Torrey, John C., discusses the viscosimeter as an aid in the detection of liquefying bacteria. He thinks that by this means the time consumed in the liquefication test may be reduced from 14 to 4 or 5 days.—J. Med. Research, 1910, v. 23, pp. 377–390.

Dodson, Edward, describes a method of staining deep colonies in plate cultures *in situ* in agar media.—Lancet, 1910, v. 179, p. 310.

BIOLOGIC METHODS.

An editorial (J. Am. M. Ass., 1910, v. 54, p. 1790) discusses the meiostagmin reaction with a review of the work of Ascoli, Izar and others. Further observations demonstrated to what extent the reaction may be relied on as a method of diagnosis.

Babes and Busila contribute a brief study of the relations which exist between the antigens and the antibodies, syphilitic, tuberculous and leprous.—Compt. rend. Soc. Biol. 1910, v. 68, pp. 181–184.

McWeeney, E. J., discusses the precipitin test in medicolegal work and appends a bibliographic list.—Lancet, 1910, v. 178, pp. 1669–1674.

Gilbert, Chabrol and Brin report on the deviation of complement in acute experimental pancreatitis.—Compt. rend. Soc. Biol. 1910, v. 69, p. 615.

Danielopolu, D., describes a new biologic reaction permitting the recognition of meningeal inflammatory processes. Augmentation of the inhibitory action of the cerebrospinal fluid on the hæmolytic power of sodium taurocholate.—*Ibid.* p. 257.

White and Ludlum present a note on the differentiation, between dementia præcox and depressive states, by so-called biologic blood tests.—J. Am. M. Ass., 1910, v. 54, p. 1868.

WASSERMANN REACTION.

Lang, J., reviews the present status of the Wassermann reaction.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 670–673.

Gillman, George, concludes a paper on the principles and technique of the Wassermann reaction, with graphic explanations of the different reactions mentioned.—Med. Rec. New York, v. 77, pp. 958–961.

Kaplan, D. M., discusses the principles and technique of the Wassermann and Noguchi reactions, and their comparative value to the clinician.—Am. J. M. Sc., 1910, v. 139, pp. 82–99. See also Litterer, William, New York M. J. 1910, v. 92, pp. 151–155, and Phelps, Wilbur R., *Ibid.* pp. 155–160.

Fox, Howard, discusses recent progress in the serum diagnosis of syphilis, and concludes, among other things, that no single modification has as yet entirely replaced the original Wassermann method.—J. Am. M. Ass., 1910, v. 55, pp. 727–733.

Wassermann, A., discusses the development and the present position of sero-diagnostics in relation to syphilis.—Therapist, Lond., 1910, v. 20, pp. 71–74.

See also article by Meier on the technique, reliability and clinical importance of Wassermann's reaction for syphilis.—*Ibid.* pp. 89–92; 103–104; 107–110; and an editorial, reviewing the communications, *Ibid.* pp. 135–139.

See also Münch. med. Wochschr. 1910, v. 57, pp. 1277–1279.

von Wassermann, A., discusses the nature and the practical use of serum diagnosis for syphilis.—Ber. d. pharm. Gesellsch., 1910, v. 20, pp. 302–315.

An editorial (Therap. Gaz., 1910, v. 34, pp. 257–261) comments on the laboratory diagnosis of syphilis and reviews some of the recent literature.

DeLisle, Justin, raises some interesting questions as to the interpretation of the Wassermann reaction.—Med. Rec. New York, 1910, v. 77, p. 233.

McDonagh, J. E. R., presents a communication on Wassermann's reaction from a practical point of view.—Lancet, 1910, v. 178, p. 920.

Klein, Bernard, presents a note on the practice of Wassermann's reaction from the quantitative standpoint.—*Ibid.* p. 1255.

FitzGerald, J. G., discusses some aspects of the serum diagnosis of syphilis.—New York M. J., 1910, v. 91, pp. 221–225.

Swift, Homer F., presents a communication on the serum diagnosis of syphilis.—New York M. J., 1910, v. 91, pp. 644–648.

Demanche and Menard assert that the modified Hecht method has all the theoretic guaranties of the Wassermann reaction, is as exact and may, in the majority of cases be substituted for it.—Compt. rend. Soc. Biol. 1910, v. 68, p. 714. See also Demanche and Detré, *Ibid.* p. 969.

v. Busila, presents a modification of the Bauer-Hecht method, which he considers one of the most practical in serum diagnosis by the complement deviation method.—*Ibid.* p. 585.

Tanton and Combe think the Porges reaction more simple and practical, though less sensitive, than the Wassermann.—*Ibid.* p. 436.

Atwood, Charles E., presents the results of his study of 204 cases of idiocy and hereditary syphilis with the serum diagnosis test.—J. Am. M. Ass., 1910, v. 55, p. 464.

An editorial (New York M. J., 1910, v. 91, p. 449) discusses the Wassermann reaction in psychiatry, with special reference to the recent work of Plaut.

Kaliski, David J., states that a comparison of the Wassermann and Noguchi systems shows that the latter is at least as sensitive as the former in the earlier stages of syphilis while in the later stages, in treated syphilis, and in the so-called metasyphilitic conditions, it is more sensitive.—Arch. Int. Med. 1910, v. 6, pp. 205–217.

Fox, Howard, reports a study of the Wassermann and Noguchi complement-fixation tests in leprosy.—Am. J. M. Sc., 1910, v. 139, pp. 725–731.

Kaplan, D. M., discusses the theoretical consideration of the Wassermann reaction and its practical application, based upon a study of 2750 cases. He concludes, among other things that not only syphilis, but many other conditions give a positive Wassermann reaction; that it is not, strictly speaking, specific for syphilis; that it is also not specific in the sense of Ehrlich.—Am. J. M. Sc. 1910, v. 140, pp. 91–99. See also J. Am. M. Ass., 1910, v. 55, pp. 1952–1956.

Teissier and Benard note the frequent occurrence of the Wassermann reaction in scarlet fever patients with hepatic lesions.—Compt. rend. Soc. Biol. 1910, v. 68, p. 272.

Nanu-Muscel and Vasiliu have found the Wassermann reaction negative in malaria, acute and chronic.—*Ibid.* p. 188.

An editorial (Med. Rec., New York, 1910, v. 77, p. 1057) calls attention to the contribution of Albert Caan (Münch. med. Wchnschr. May 10, 1910) on the Wassermann reaction in Hodgkin's disease.

Saalfield, according to the Berlin Correspondent (Lancet, 1910, v. 179, p. 1584) suggests that the requisites for the Wassermann reaction, which are of an inconstant composition, be prepared in a central laboratory under state control.

See also under Sera and Tuberculin.

For additional references on the Wassermann reaction and other biologic tests, see Chem. Abstr. Zentrlbl. Biochem u. Biophysik., J. Am. M. Ass. and Index Medicus.

5. BIOLOGIC PRODUCTS.

de Graaf, W. C., reviews some of the literature relating to the use of biologic products in medicine.—Pharm. Weekblad, 1910, v. 47, pp. 1161–1177.

Brown, Edward J., in a paper on animal materia medica, ancient and modern, gives some interesting historical data as to animal substances in human medicines.—Pharm. J. 1910, v. 31 (85), p. 557. Also Chem. & Drug., 1910, v. 77, p. 697.

Coblentz, Virgil, states that undoubtedly some organo-therapeutic agents, along with a goodly number of serums, will be introduced. The standardization of the latter will be looked after by the Government.—Proc. Maine Pharm. Ass., 1910, p. 45.

The Journal of the American Medical Association (1910, v. 54, p. 1885) notes that the Committee of Revision was given authority to admit sera and other biologic products, as also biologic assays of drugs.

Hemm, Francis, reviews the animal drugs and their preparations included in the U. S. P. VIII.—Proc. Missouri Pharm. Ass., 1910, pp. 98–103.

Welch, John Edgar, makes a preliminary report on normal human blood serum as a curative agent in hæmophilia neonatorum, with suggestions for its use in other conditions.—Am. J. M. Sc., 1910, v. 139, pp. 800–816.

Robert-Simon and Choay (Soc. therap. Oct. 13, 1909) discuss the preparation and use of extract of normal horse serum.—Bull. sc. pharmacol. 1910, v. 17, p. 499.

Bordas, Lortat-Jacob and Sabareanu discuss the action of cold on the toxicity of blood serum and of organic extracts.—J. physiol. et path. gen. 1910, v. 12, pp. 20–25, 42–49.

Chiron (Hom. World, Jan.) reports a case, diagnosed as arteriosclerosis, in which eel serum 6 was given every two hours, and in eight days the patient was up and about, remaining well ever since.—J. Am. Inst. Homœop. 1910, v. 2, p. 251.

Leary and Hastings make a preliminary communication on the therapeutic use of ascitic fluid.—Boston M. & S. J., 1910, v. 163, p. 283.

An editorial (N. York M. J., 1910, v. 91, p. 1302) calls attention to the observations recorded by Victor Audibert (Bull. Soc. med. hôp.) on the use of ascitic fluid as a remedy.

Aarons, S. Jervois, presents a note on the use of pituitary extract in obstetrics and gynæcology, with special reference to the treatment of hæmorrhage, intestinal paresis and shock.—Lancet, 1910, v. 179, p. 1828.

Solis-Cohen, Solomon, recommends the use of pituitary extracts in hay fever, asthma, etc. and says that there are at least two, and possibly several, good commercial preparations now available.—Boston M. & S. J., 1910, v. 162, p. 730. Also N. York M. J. 1910, v. 91, p. 1141, and Med. Rec. N. Y., 1910, v. 77, p. 932.

An editorial (N. York M. J. 1910, v. 92, p. 33) asserts that evidences are multiplying that the pituitary gland, so long an enigma to the anatomist, an organ whose function is even now but dimly understood, is destined to play a great rôle in the treatment of certain diseases, particularly of the circulatory system.

Berkeley, William N., reports an improved method of preparing parathyroid extract, which he has used successfully in the treatment of paralysis agitans.—Med. Rec. N. Y., 1910, v. 78, p. 1146.

Edmunds, Walter, presents a note on the treatment of Grave's disease with the milk of thyroidless goats.—Lancet 1910, v. 178, p. 1135.

Frank, Robert T., discusses the question as to whether ovotherapy as now practiced has an experimental basis, and urges a judicial attitude toward contradictory systems in this connection.—Arch. Int. Med. 1910, v. 6, pp. 314–329.

McDonald, Ellice, has had successful results in the use of lutein extract in the treatment of decreased menstruation and premature menopause.—J. Am. M. Ass., 1910, v. 55, pp. 205–207.

Villemin, F., contributes a note on the physiologic action of intravascular injections of extract of corpus lutem.—Compt. rend. Soc. Biol. 1910, v. 68, p. 874.

An editorial (Med. Rec. 1910, v. 77, p. 111) comments on the work of A. J. Wall in connection with the use of crotalin as a therapeutic agent.

Mays, Thomas J., reports on an improved method for the administration of crotalin.—Boston M. & S. J. 1910, v. 162, p. 46.

Battelli, F., contributes a note on the preparation of thrombokinase and its employment as a hæmostatic.—Compt. rend. Soc. Biol. 1910, v. 68, p. 789.

Rosenthal and Wetzel discuss the scientific basis of bacteriotherapy by lactic ferments; and Rosenthal, their action in rheumatism.—*Ibid.* pp. 92–94. See also p. 349.

Medalia, Leon S., discusses the therapeutic value of lactic acid bacteria.—Boston M. & S. J., 1910, v. 162, pp. 739–743.

Kendall, Arthur I., outlines briefly the salient features of lactic acid therapy.—*Ibid.* v. 163, pp. 322–325.

1. ENZYMES.

A discussion on the nature and principles of enzymes before the Scientific Section of the Philadelphia Branch is reported.—Bull. Am. Pharm. Ass., 1910, v. 5, pp. 224–225.

Lenz, Wilhelm, reports on the new peptic enzyme isolated from honey.—Apoth. Ztg., 1910, v. 25, pp. 678–679. Also Arb. pharm. Inst. Univ. Berl. (1910), 1911, v. 8, pp. 222–225.

Bach, A., presents a review of the newer work in the field of plant and animal oxidases and peroxidases.—Biochem. Centralbl., 1909–1910, v. 9, pp. 1–13; 73–87.

Kastle, J. H., presents a comprehensive review of the bibliography of the oxidases and other oxygen-catalysts concerned in biological oxidations.—Bull. No. 59, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, pp. 164.

Bach, Alexis, presents a polemical summary of the rival theories of Bertrand and of Bach on the action of oxydases.—J. Chem. Soc., Lond., Abstracts 1910, v. 98, Pt. 1, p. 1801.

Sherman, Kendall and Clark report on the examination of methods for the determination of diastatic power, and propose a gravimetric method which utilizes the results of the quantitative study of the action of pancreatic amylase.—J. Am. Chem. Soc., 1910, v. 32, pp. 1073–1086.

Hirayama, K., presents some observations on proteolitic ferments and compares the results obtained by the Mett and Sörensen methods.—Ztschr. f. physiol. Chem., 1910, v. 65, pp. 290–292.

Euler and Beth af Ugglas report a study of the chemical composition and the formation of enzymes.—*Ibid.* pp. 124–140.

Euler, Hans, reports observations on the general chemistry of enzymes and presents a review of the literature relating to the subject.—Ergeb. d. Physiol., 1910, v. 9, pp. 241–333.

Schmidt, Ernst Willy, reports a study of enzymes, their behavior with heat, and their possible sterilization.—Ztschr. f. physiol. Chem., 1910, v. 67, pp. 314–323.

Vernon, H. M., reports a comprehensive study of, and reviews the literature on, intracellular enzymes and the action of antiseptics and of temperature on enzymes.—Ergeb. d. Physiol., 1910, v. 9, pp. 138–240.

Rosenthaler, L., reports observations on asymmetrical syntheses produced by enzymes, and the occurrence of albumen as a protective for enzymes.—Biochem. Ztschr., 1910, v. 26, pp. 1–13.

England, Jos. W., discusses the physiological actions of enzymes.—Midl. Drug., 1910, v. 44, pp. 151–154.

An editorial (Med. Rec. 1910, v. 78, p. 628) looks upon the trypsin treatment of local tuberculous foci as at least on a par with the old iodoform absorption method.

An editorial (Bull. Am. Pharm. Ass., 1910, v. 5, p. 163) points out that while the digestive ferments are not favorably regarded by the medical profession, yet they lead all other medicines in frequency of prescription. One out of every 16 prescriptions contains some preparation of pepsin, pancreatin or similar ferment.

A number of references on enzymes, their occurrence and possible uses, will be found in the Index Medicus, J. Am. M. Ass., and Biochem. Centralbl.

2. DISINFECTANTS.

Woodhead and Ponder discuss the bacteriological standardization of disinfectants.—Pharm. J. 1910, v. 31 (85), p. 155. For discussion, see pp. 169, 172.

See also *Ibid.* p. 166, and Kingzett and Woodcock, bacteriological testing of certain disinfectants and the result as affected by varying conditions.—*Ibid.* pp. 157–159; also Hewlett, R. Tanner, pp. 159, 202, 205; and Summerville, David, p. 205 and p. 117. See also Year-Book of Pharmacy, 1910, pp. 329–362, and Lancet, 1910, v. 179, pp. 418–422.

An editorial note (Lancet 1910, v. 178, p. 1283) gives the manipulative details employed in the *Lancet* Laboratory in the chemical analysis of coal-tar disinfectants.

"F. S." reviews several recent articles on the standardization of disinfectants.—Pharm. Ztg., 1910, v. 55, p. 618.

Walker, J. T. Ainslie, contributes a note on the standardization of disinfectants in which he criticizes rather severely the work of the Lancet Commission.—Lancet 1910, v. 178, p. 68.

Kingzett, C. T., thinks no better evidence can be found, of the impossibility of standardizing disinfectants as a whole by any one test, than in the report of the Lancet Commission, which he criticizes freely.—Pharm. J. 1910, v. 30 (84), p. 18. Also Chem. Trade J. Lond., 1910, v. 46, p. 25.

Xrayser II, thinks the standardization of disinfectants will never get any "forwarder" until some recognized public authority makes a careful study of the question, and decides on methods of assay that are applicable to the different varieties of disinfectants.—Chem. & Drug., 1910, v. 76, p. 15.

Smith, F. A. Upsher, discusses the bacteriological standardization of disinfectants and calls attention to some of the objections to bacteriological methods of standardizing disinfectants.—Am. Druggist, 1910, v. 56, pp. 355–356. Also Drug Topics, 1910, v. 25, pp. 196–198; 214.

He also discusses chemical methods of testing disinfectants, reviews the several methods that have been proposed, and concludes that none of the methods mentioned can be considered as affording a perfect method of standardizing disinfectants.—Am. Druggist, 1910, v. 57, pp. 100–101.

Reitz, Adolph, calls attention to the chemical problems involved in the field of bacteriology, more particularly in connection with disinfection and disinfectants, and reviews some of the current methods of testing and standardizing disinfectants.—Ztschr. ang. Chem., 1910, v. 23, pp. 2193–2201.

Delaye presents five propositions with reference to the manufacture and sale of disinfectants which, after slight modification were adopted by the Brussels Congress. The several points covered include provisions for (1) Government control and supervision of manufacture; (2) conditions of sale and labeling of package; (3) sale reserved exclusively to pharmacists; (4) examination of commercial samples; (5) official regulations.—J. pharm. Anvers. 1900, v. 66, p. 677.

See also Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 290; Chem. & Drug. 1910, v. 77, p. 404; Drug. Circ., 1910, v. 54, p. 600, and Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 21–31.

A resolution adopted by the Tenth International Pharmaceutical Congress, held in Brussels in 1910, suggests uniform standards for the regulation of the sale of disinfectants.—Pharm. Post, 1910, v. 43, p. 726. See also Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 233–244.

An editorial (Lancet 1910, v. 178, p. 255) calls attention to the recently promulgated regulations of the Belgian Government with reference to disinfectants.

Post and Nicoll present a study on the comparative efficiency of some common germicides.—J. Am. M. Ass., 1910, v. 55, p. 1635–1639. See also p. 1828.

Lüders, R., reviews the progress made in the production of new antiseptics and disinfectants.—Chem. Ztg. 1910, v. 34, pp. 642–643. Also Ztschr. offentl. Chem., 1910, v. 16, pp. 62–69.

An editorial (J. Am. M. Ass., 1910, v. 54, p. 1791) discusses the chinosol report of the Council on Pharmacy and Chemistry.—See also *Ibid.* p. 1801.

Delepine, Sheridan, presents a contribution to the study of chemical disinfectants, with a number of tables showing the influence of various factors in disinfectants and disinfection.—J. Soc. Chem. Ind., 1910, v. 29, pp. 1344–1354.

Walcott, Wiliam W., presents the report on fumigation experiments undertaken to test the value of chemical disinfection after disease.—Rep. Massachusetts Bd. Health, 1910, pp. 544–556.

Bril, A., contributes an interesting note on the disinfection of houses during the pest of 1669.—J. pharm. Anvers, 1910, v. 66, p. 193.

Bonjean, Ed., contributes an article in defense of disinfection.—Bull. sc. pharmacol. 1910, v. 17, pp. 216–228.

Farrington, Frank, discusses the disinfectant business, and the desirability of pharmacists becoming acquainted with the possible developments.—Nat. Druggist, 1910, v. 40, pp. 369–370.

Croner calls attention to some of the possible means for disinfection without apparatus.—Ztschr. ang. Chem., 1910, v, 23, p. 569.

Demachy gives a synoptic table for the process of immediate and elementary disinfection without recourse to special apparatus.—Bull. sc. pharmacol. 1910, annexe, p. 33.

Reichel, Heinrich, in a contribution to the theory of disinfection, discusses the disinfection action of phenols and the influence of various substances on the action of phenol.—Biochem. Ztschr., 1909, v. 22, pp. 149–230.

McClintic, Thomas B., reports a study of the disinfectants, their use and application in the prevention of communicable diseases.—Public Health Bulletin, No. 42, 1910, Washington 1911, pp. 46.

Additional references on disinfection and disinfectants will be found in Hyg. Rundschau; Zentrlbl. Biochem. u. Biophisik. 1910; J. Am. M. Ass., and Index Medicus.

6. VEGETABLE DRUGS.

Kraemer, Henry, discusses the pharmacognosy of the U. S. P. and points out that in many respects the monographs describing crude drugs are less satisfactory than the corresponding monographs included in the foreign pharmacopœias.—Am. Druggist, N. Y., 1910, v. 56, pp. 37–39. See also Western Druggist, 1910, v. 32, pp. 115–119, and Am. J. Pharm. 1910, v. 82, pp. 51–61.

The proposed standards for crude drugs discussed at the Second International Congress for the Suppression of Fraud are reprinted.—Oesterr. Chem.-Ztg., 1910, v. 13, pp. 31–32.

Schneider, Albert, discusses the microscopical examination of drugs, foods and textile fabrics, and presents a number of illustrations showing the structural characteristics of different drugs.—Merck's Rep., 1910, v. 19, pp. 61 ff.

The Chemist and Druggist (1910, v. 77, p. 898) notes that the Ph. Germ. V monographs on drugs of vegetable origin are admirable examples of German thoroughness. Not only are the external characters well described, but the microscopic details also of the powdered drug are minutely elaborated and supplied, with indications of the sizes of cells, etc., in micromillimetres.

A review of the Ph. Germ. V points out that for determining the identity and purity of drugs, microscopic descriptions have been elaborated and are required much more frequently.—Pharm. Ztg., 1910, v. 55, p. 1004.

Hartwich, C., comments on the crude drugs of the Ph. Germ. V—Apoth. Ztg., 1910, v. 25, pp. 1020–1022; 1034–1036; 1045–1046; 1052–1053.

Caesar & Loretz, in a pamphlet of 60 pages (Pharm.-Ber. D. A. B. 5 [1910] 1911) present a critical review of the vegetable drugs included in the Ph. Germ. V.

An editorial (Am. Druggist, 1910, v. 57, p. 295) points out that the monographs in the Ph. Russ. VI devoted to the description of drugs derived from the vegetable kingdom are particularly interesting, and considerable space is devoted to an enumeration of their characters. A special point is made of drawing attention to possible adulterations which should be avoided.

Mitlacher, W., comments on the pharmacognosy of the Ph. Hung. III.—Pharm. Post, 1910, v. 43, pp. 89–90.

Wulff, C., discusses the requirements for drugs made by the Ph. Ital. III.—Apoth. Ztg., 1910, v. 25, pp. 894–895.

Kraemer, Henry, in a review of the Ph. Ndl., states that the macroscopic descriptions of vegetable drugs are complete, and written in such a manner as to indicate that drugs are to be examined both macroscopically and microscopically by pharmacists. The histological characters are carefully described, including descriptions of both longitudinal and transverse sections of a number of drugs.—Am. J. Pharm. 1910, v. 82, p. 519.

Schneider, Albert, suggests that the U. S. P. provide an age limit for vegetable drugs.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 343.

Rusby, H. H., discusses the physical standards of the United States Pharmacopœia and the application of these standards at our most important port of entry.—Drug. Circ., 1910, v. 54, pp. 616–620. See also Practical Druggist, 1910, v. 27, pp. 422–424.

The Medical Society of the State of New York recommends that drugs that are nearly obsolete and those whose medicinal value is questionable be omitted in the next revision.—Drug. Circ., 1910, v. 54, p. 255.

Wiley, Harvey W., thinks that we should confine drugs of a particular type to as few kinds as possible, and perhaps one or two of the preparations of tannin which are now official might be retained and the others omitted.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 603, 640.

Osborne, O. T., recommends that the official preparations of a drug be enumerated under the title of that drug.—*Ibid.* p. 235.

Diekman, G. C., thinks it desirable that a list of the official preparations of which a drug forms a part be given under the title of that drug.—*Ibid.* p. 83.

Lichthardt, G. H. P., thinks that the present descriptions of crude drugs are not desirable and suggests that it would be better if photographs of the various drugs were shown together with photos of mixtures of these same drugs and the adulterants usually found.—Pacific Pharmacist, San Francisco, 1909–10, v. 4, p. 87.

McKesson, Donald, thinks that the object of the U. S. P. is to prescribe the standard of drugs in the condition in which they are used in prescriptions or administered to the ultimate consumer. Standards for the crude sources of these articles are not only unnecessary, but hamper the manufacturer and increase the cost of the finished product without raising its value.—Drug Topics, 1910, v. 25, p. 19.

Hereth, F. S., discusses the Pharmacopœia from the manufacturer's point of view and presents a number of suggestions for perfecting that book.—Practical Druggist, 1910, v. 28, pp. 63–64.

Plaut, Albert, thinks there is need for improvement in the description of botanical drugs. He favors the deletion of monographs on crude materials, and the description of each in connection with one compound into which it enters.—Am. Druggist, 1910, v. 57, p. 385.

Remington, Joseph P., believes that we must depend for many years to come on the accuracy of the pharmacopœial description of vegetable drugs.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 88.

Kebler, Lyman F., suggests that the Pharmacopœia should allow in some drugs a certain limited amount of foreign material, such as a small percentage of stems in leaf-drugs, sand or earth in root-drugs.—*Ibid.* p. 231. See also Proc. Maryland Pharm. Ass., 1910, p. 131.

Hallberg, C. S. N., thinks that the present botanic and chemical nomenclature cannot be improved on.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 764.

The American Pharmaceutical Association approves recommendations outlining changes in the U. S. P., requirements for crude drugs.—*Ibid.* pp. 535, 536, 537.

Kraemer, Henry, points out that fully 70 per cent of the articles enumerated in the U. S. P. are more or less intimately dependent on plant drugs.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 85. Also Am. J. Pharm. 1910, v. 82, p. 52, and J. Am. M. Ass., 1910, v. 54, p. 396.

Lloyd, John Uri, reviews some of the contributions that have been made on American materia medica.—Am. J. Pharm. 1910, v. 82, pp. 1–11, 82–93.

Wall, Otto A., presents a table, embodying a system of pharmacognosy and a list of drugs illustrating the application of the table for the classification or recognition of the various drugs.—Meyer Bros. Drug., 1910, v. 31, pp. 48–51.

A book review (Pharm. Era, N. Y., 1910, v. 43, p. 1068) calls attention to the text book on Botany and Pharmacognosy by Henry Kraemer. See also Am. J. Pharm. 1910, v. 82, p. 579.

A book review (Merck's Rep., 1910, v. 19, p. 206) calls attention to Bulletin No. 12 of the Lloyd Library, devoted to a discussion of the Eclectic alkaloids, resins, resinoids, oleoresins and concentrated principles.

Mitlacher, W., calls attention to and commends the Handbook of Pharmacognosy, by A. Tschirch.—Ztschr. allg. osterr. Apoth.-Ver., 1910, v. 48, p. 215. See also Pharm. Post, 1910, v. 43, p. 245.

A book review presents a number of illustrations from, and comments on, the "Real-Enzyklopädie der gesamten Pharmazie" by Moeller and Thoms.—*Ibid.* pp. 589–593.

Merrill, E. D., presents an index to Philippine botanical literature.—Philippine J. Sc., v. 5, C, pp. 259–266.

Brown, Linwood A., points out that the practice of keeping crude vegetable drugs in cardboard or paper containers, or in open drawers, in drug stores, is not good practice, as a great many of them depend for their medicinal properties upon the presence of volatile principles, and when so kept, rapidly lose a considerable portion of such constituents in the hot dry atmosphere of the average drug store.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 129.

Sayre, L. E., is reported as presenting resolutions on drug reform.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 343.

Kraemer, Henry, points out that many drugs are becoming scarce and this fact makes the proper study of pharmacognosy more important, so as to be able to secure genuine and pure drugs.—*Ibid.* p. 85.

Lloyd, John Uri, thinks that each drug should be studied individually so as to arrive at the best method and means of securing its desired constituents in the highest quality.—*Ibid.* p. 152.

Perrot and Goris report some observations on fresh drugs and their galenical preparations.—Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 135–140. See also Pharm. Post, 1910, v. 43, p. 713.

Lowenstein and Dunne report observations on the influence of the method of heating on the non-volatile ether extract of spices.—J. Ind. & Eng. Chem., 1910, v. 2, pp. 47–49.

Tunmann, O., discusses the Hamburg drug market and presents data, in the form of tables largely, showing the imports and exports from the port of Hamburg.—Apoth. Ztg., 1910, v. 25, pp. 311–312; 413–414; 424–425; 453–454; 475–476. See also pp. 549–550; 556–558; 565–566.

Mitlacher, Wilhelm, enumerates the drugs that have been, or are being, cultivated; also the drugs gathered from wild growing plants in Austria and Hungary.—Ztschr. allg. österr. Apoth.-Ver., 1910, v. 48, pp. 459–461.

Kremers, Edward, reports on some experiments in the cultivation of drugs made in connection with the course in pharmacy at the University of Wisconsin.—Proc. Wisconsin Pharm. Ass., 1910, pp. 35–36.

Ransom, Francis, discusses cultivation of medicinal plants and refers to the work of Tschirch, Chevalier, Kraemer, and others.—Pharm. J. 1910, v. 31 (85), p. 164. See also Year-Book of Pharmacy, 1910, p. 315.

"Finder" contributes an interesting note on English herbs gathered and grown, illustrated by several pictures of herb growing in Kent.—Chem. & Drug. 1910, v. 76, pp. 179–182. See also Pharm. Post, 1910, v. 43, pp. 1017–1022.

Badermann, G., comments on the cultivation of official plants in the German colonies and reports some of the results that have been observed.—Arch. d. Pharm., 1910, v. 248, pp. 257–265.

See also article by Stich, Pharm. Ztg., 1910, v. 55, p. 518.

Holm, Theo. (Merck's Rep.), continues his botanical and morphological description of North American medicinal plants, contributed annually since 1907.

Peckolt, Th., continues his enumeration of the useful and medicinal plants of Brazil.—Ber. d. pharm. Gesellsch., 1910, v. 20, pp. 36–58, 142–153, 481–506, 585–600.

Henkel, Alice, reports her experiments in the cultivation of drug plants, and describes a medicinal plant garden.—Drug. Circ., 1910, v. 54, pp. 7–10.

Rabak, Frank, discusses the production of volatile oils and perfumery plants in the United States.—Am. Perf. 1910–11, v. 5, pp. 219–224.

Delpy, Hedwig, presents a contribution to our knowledge of the medicinally useful labiata, reviews the history of some of these drugs and describes the individual drugs at length.—Ztschr. Allg. osterr. Apoth.-Ver., 1910, v. 48, pp. 213 ff. The conclusions and a comprehensive bibliography are appended.—*Ibid.* pp. 373, 381.

Schneider, Albert, describes some objectionable and unusual Chinese drugs imported into the United States.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1066-1077.

Francis, J. M., thinks that the whole machinery of collecting and marketing native drugs is in need of radical change, through proper instruction of the collectors, common store keepers and the larger dealers in native drugs.—Proc. Pennsylvania Pharm. Ass. 1910, p. 132.

The Board of Control, in commenting on the prevention of adulteration, suggests that the Government authorities take steps to have inspection at the various ports of entry more uniform than it is at present.—Proc. N. W. D. A. 1910, p. 373.

Wiley, H. W., reports that adulteration has decreased to a large extent, resulting in the importation of drugs of superior quality.—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 470.

Beilstein, Christian, quotes an eminent authority as saying that there is no longer one-tenth the adulteration there was formerly.—Proc. N. W. D. A., 1910, p. 96.

Clark, A. H., asserts that there has been a marked improvement in the condition of the drugs in the Chicago market since the food and drugs act went into effect.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 101.

Rusby, H. H., is quoted as saying that drug warehouses in Austria, Germany, Holland and other countries were filled with crude drugs, reshipped from the United States because they were below standard—Bull. Pharm. 1910, v. 24, p. 180.

An editorial (Drug Topics, 1910, v. 25, p. 2) asserts that most of the so called adulteration is such in name only. It is really in a great many instances simply a case of careless collecting by ignorant persons.

An editorial (Am. Druggist, 1910, v. 56, p. 1) discussing sophistication in crude drugs, states that, to listen to some of the gentlemen responsible for the enforcement of the food and drugs law, one would think that America was a dumping ground for all the adulterated and sophisticated drugs that are denied admission to European countries, and asserts that the very opposite of this is the truth.

See also editorial Practical Druggist, 1910, v. 27, pp. 389–390.

Schneider, Albert, discusses the adulteration of vegetable drugs, and presents summaries based upon the personal microscopical examination of crude and powdered vegetable drugs and spices, in San Francisco, from October 1908 to May 1910.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1064–1065. See also Pacific Pharmacist, San Francisco, 1909–1910, v. 4, pp. 13–14.

Reum, Arthur W., discusses the purity of drugs and reports the percentage of adulteration one may expect to find in commercially collected drugs.—*Ibid.* pp. 455–456.

Engelhardt, Hermann, reports on the quality of some crude drugs examined during 1909.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1256–1258.

Brown, Lucius P., reports examination of 11 samples of miscellaneous drugs; 5, or 45.45 per cent, of which were found to be illegal.—Bull. Tennessee Food and Drugs Insp., 1910, p. 30.

Sindall, Harry E., discusses the sampling of ground spices.—Am. J. Pharm. 1910, v. 82, pp. 80–82.

Rusby, H. H., points out that the work of securing samples in connection with drug inspection must be very incomplete and convictions will too often fail because of this difficulty.—Drug. Circ., 1910, v. 54, p. 7.

Kebler, L. F., points out that in connection with drugs the Pharmacopœia makes no provision for the presence of any foreign substances, yet it is impossible to meet with a trade sample absolutely free from contamination.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 593.

Morgan, F. P., thinks that the proportion of foreign matter permissible in crude vegetable drugs should be definitely fixed.—J. Am. M. Ass., 1910, v. 54, p. 1812.

Dohme, A. R. L., thinks the question of ascertaining the maximum amount of an adulterant is a practical one and he feels rather favorably disposed towards such a proposition.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 596.

See also comments by Patch, *Ibid.* p. 740.

Rusby, H. H., states that he has met with an importation of many tons of ground olive pits, which the consignee said he was going to use as a ''filler in chicken feed'', the truth being that he never sold a pound of chicken feed in his life, but dealt only in whole and powdered drugs.—Practical Druggist, 1910, v. 27, p. 423.

Kraemer, Henry, describes, with illustrations, a new vegetable adulterant; the materials consisted of the hulls of *Juglans regia* imported as a substitute for walnut shells, olive pits, etc.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 995–998.

Greshoff, M., reports phytochemical observations on the constituents of a number of drugs and plants. (Royal Botanical Gardens, Kew, Bulletin of Miscellaneous information No. 10, 1910 pp. 397–418)—Pharm. Weekblad, 1910, v. 47, pp. 146–153, 170–180, 193–204.

Irving, A. A., presents observations on the beginning of photosynthesis and the development of chlorophyll.—Ann. Bot., Lond., 1910, v. 24, pp. 805–815.

See also contributions by Willstatter and others.—Ann. d. Chem. 1910, v. 378, pp. 1–152. Also v. 371.

An editorial (N. York M. J., 1910, v. 91, p. 865) asserts that more and more attention is being paid in the schools to the investigation of plant constituents, and it is not unlikely that, through the combined work of pharmacognosists and pharmacologists, the teachers of medicine may yet be led back to the use of vegetable drugs and away from the synthetics, which are now enjoying so great a vogue.

Butler, George F., asserts that we have in the active principles infinitely more reliable, dependable and efficient remedies than we have in any other preparations of vegetable drugs.—N York M. J. 1910, v. 92, pp. 951–954.

Benedict, A. L., can see no reason for retaining the crude drugs or galenicals after their active principles are practically available, but if retained they should be assayed.—Western Druggist, 1910, v. 32, p. 17.

An editorial (N. York M. J. 1910, v. 92, p. 274) discussing gross drugs *vs.* active principles, declares, at the risk of being classed among the empiricists, a feeling in favor of administering the whole drug, either in the form of abstract, powder or tincture.

1. POWDERED DRUGS.

Remington, Joseph P., thinks that now powdered drugs are so widely used they should be fully described in the U. S. P., so as to facilitate their recognition and thus control their identity and purity.—J. Am. M. Ass., 1910, v. 54, p. 396. See also Bull. Am. Pharm. Ass., 1910, v. 5, p. 88.

Kraemer, Henry, notes that some of the foreign pharmacopœias do not recognize powdered drugs. There is much to be said in favor of this, as powdered drugs are always difficult of recognition and generally tend to deteriorate rapidly.—J. Am. M. Ass., 1910, v. 54, p. 396. Also Bull. Am. Pharm. Ass., 1910, v. 5, p. 86.

The American Pharmaceutical Association approves several recommendations bearing on pharmacopœial requirements for powdered drugs.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 536.

McKesson, Donald, thinks the necessity for descriptions of powdered drugs microscopically examined is already well recognized.—Drug Topics, 1910, v. 25, p. 19.

Davis, Charles N., reports that powdered drugs are to be required to represent the entire drug unless otherwise stated. The amount of allowable tailings, gruffs, or residue, to be determined and inserted in the text.—Proc. Maine Pharm. Ass., 1910, p. 40.

Rusby, H. H., asserts that the ingenuity of the Pharmacopœia revisers must be exercised in devising methods for the application of standards to the drugs in powdered condition, and calls attention to some of the many contaminations that are found in powdered drugs.—Drug. Circ., 1910, v. 54, p. 617.

Raubenheimer, Otto, thinks that more attention should be given powdered drugs. He hopes that the crude materials will be retained as at present.—Am. Druggist, 1910, v. 57, p. 385.

The Kings County Pharmaceutical Society recommends that powdered drugs be recognized and methods given for their chemical and microscopic examination.—Drug. Circ., 1910, v. 54, p. 254.

See also report of the New York Branch of the A. Ph. A.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 288.

Schneider, Albert, suggests that every vegetable drug included in the U. S. P. have a brief diagnostic description based upon its microscopical appearance.—*Ibid.* p. 344.

Linde, O., discusses the microscopical examination of drugs, and methods for preparing permanent mounts.—Apoth. Ztg., 1910, v. 25, pp. 837 ff.

Greenish and Braithwaite have devised a method for the detection of worm-eaten drugs, by which so small a quantity as 0.00001 gm. of beetle may be recognized in 5 gm. of powdered drug.—Lancet, 1910, v. 179, p. 1527.

Evans, J., points out that the incineration of drugs affords one of the most valuable indications of normal character, as the percentage of ash and its chemical character often suffice by themselves to indicate impurity or sophistication.—Brit. & Col. Drug., Lond., 1910, v. 57, p. 133.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 4) in discussing the requirements for powdered drugs made by the Ph. Germ. V, point out that the opening in the mesh of the sieve is given as the standard for fineness of powder. They also point out that, unless otherwise provided, drugs are to be powdered entire without leaving a residue.

Dohme and Engelhardt state that the Ph. Hung. III directs that only the best materials should be used for making official powdered drugs.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1190.

Pickel, J. M., describes a rapid method of determining crude fiber.—J. Ind. & Eng. Chem., 1910, v. 2, pp. 280–281.

MacNider, G. M., comments on the determination of crude fiber, according to the method of the A. O. A. C.—*Ibid.* pp. 281–282.

2. VALUATION OF VEGETABLE DRUGS.

McKesson, Donald, thinks that many of the pharmacopœial standards for crude drugs should be replaced by closely defined standards for extractives, active principles and powdered drugs.—Drug Topics, 1910, v. 25, p. 19.

Dohme, A. R. L., in discussing standardized and standard drugs, voices his objection to some of the misrepresentations recently made regarding the U. S. P. and the N. F.—Am. Druggist, 1910, v. 56, pp. 163–165.

Puckner, W. A., thinks that the fact that the alkaloidal strength of a number of important drugs was reduced at the request of manufacturers and wholesalers lends some color of truth to the frequently expressed opinion that manufacturers and wholesalers dominate the U. S. P.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 102.

An editorial (Am. Druggist, 1910, v. 56, p. 1) calls attention to a contribution by Lyons on the progress of standardization in the Pharmacopœia.

Lyons, A. B., continues his discussion of progress in standardization of pharmacopœial drugs.—Am. Druggist, 1910, v. 56, pp. 6–7, 43–44, 78, 103–104.

Gordin, H. M., thinks it would suffice to have the Pharmacopœia indicate the strength and in some cases the method of arriving at the result, without giving in detail the methods of assay or testing.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 102.

Anselmino, O., discussing the failure of the Ph. Germ. V to comply with some of the less important provisions of the Brussels Conference Protocol, points out that, while this Protocol makes requirements for alkaloidal content of drugs, no provisions are made for determining alkaloidal content; and asserts that this lack of method would lead to widely varying results.—Ber. d. pharm. Gesellsch., 1910, v. 20, p. 551.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 6) point out that the Ph. Germ. V directs that assays of drugs are to be based on the air dry substance, in place of, as formerly, the dried substance. They state that the moisture content of better quality drug powders varies from 5 to 10 per cent.

Davis, N. S., hopes the time will come when drugs in the Pharmacopœia will be defined by their physiologic action as well as by their physical and chemic attributes, because the possession of physiologic action is the only thing that makes them useful drugs. Therefore this is the best definition of them. For those drugs, the physiologic action of which are unknown, he thinks this emphasis would lead to their systematic study or rejection.—J. Am. M. Ass., 1910, v. 54, p. 305.

Kebler, Lyman F., reports the opinion that it would be desirable to have the N. F. prescribe a definite standard, if practicable, for each drug recognized.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 145.

Custis, J. B. Gregg, reports that the trustees of the institute for drug proving have made sixteen provings of the drug prepared under the supervision of the Department of Agriculture, and standardized by them, supplementary to the work they have been doing on animals.—Tr. Am. Inst. Homœop. 1910, p. 97 (In. J. Am. Inst. Homœop. 1910, v. 2).

3. ASH DETERMINATIONS.

Rosengarten, George D., thinks that the present requirements of "no weighable residue" is indefinite and the results depend a great deal on the operator.—Am. J. Pharm. 1910, v. 82, p. 28.

Riedel's Berichte (1910, p. xxvi) suggests the inclusion of a definition of the term unweighable residue and proposes a limit of 0.005 gm.

Schamelhout, A., thinks that the term non appreciable or non-weighable residue are absolutely too vague and should be dismissed both from the German and the Belgian pharmacopœias. He notes Riedel's proposal of 0.005 gm. as the limit, and the adoption, by the seventh Section of the Second International Congress for the Repression of Fraud, of his own suggestion of 0.0005, any residue above this should be specifically indicated.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 97.

LaWall and Bradshaw discuss the desirability of establishing ash standards for drugs and present a list of drugs with the per cent of ash found by them in the commercial air-dry drug. They believe that an average ash standard, appended to each drug description, would be of advantage and value in fixing its identity.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 750–755. Also Drug. Circ., 1910, v. 54, p. 409.

Kebler, Lyman F., thinks that the Pharmacopœia should prescribe the maximum ash content in connection with vegetable drugs.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 231.

Raubenheimer, Otto, favors the inclusion of ash standards in the Pharmacopœia and more tests for the powdered form of the drug.—*Ibid.* p. 84.

Kebler, L. F., considers ash determinations of great value and suggests that some maximum limit be fixed for the presence of inorganic impurities.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 755.

Breves, Rudolph, thinks the ash content important for the determination of the purity of drugs and he would add to the present list mastiche, pimenta, balsam of tolu, myrrh, jalap, ipecacuanha, granatum, guaiac and lactucarium.—Practical Druggist, 1910, v. 28, p. 39.

Rusby, H. H., thinks that the determination of ash content of drugs will contribute materially to the detection of stems or woody tissue in the ground drug.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 755.

Stanislaus, I. V. S., has found on examination of vegetable drugs that very often there was mineral matter adhering to them to a considerable extent.—*Ibid.* p. 755.

Riedel's Berichte (1910, p. xxv) suggests the inclusion of limitations for ash, in connection with the descriptions of many of the vegetable drugs.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, pp. 6–8) discusses the Ph. Germ. V directions for determining the ash content of drugs, and expresses the belief that while lixiviation undoubtedly gives exact results it can readily be replaced by more simple procedures that are less time consuming. They express themselves as being in favor of the use of foreign material, preferably sand, as a diluent in determining the ash content of drugs.

Gutbier, A., describes and illustrates a platinum crucible especially designed for determining ash.—Chem. Ztg., 1910, v. 34, p. 211.

Aps, Edmond J., describes and illustrates a new apparatus for the safe and gradual incineration of substances of all kinds for determining the ash content.—*Ibid.* p. 1374.

Rosengarten, George D., thinks that for the determination of ash residue a platinum crucible is essential, as porcelain crucibles frequently introduce impurities not present in the original substance.—Am. J. Pharm. 1910, v. 82, p. 28.

An abstract (Apoth. Ztg.) gives the percentage of ash and moisture in various drugs, as reported by Peters.—Drug Topics, 1910, v. 25, p. 5.

4. GLUCOSIDES.

Bokorny, Th., discusses the wide-spread occurrence of glucosides and reviews some of the work that has been done in connection with the study of their composition.—Chem. Ztg., 1910, v. 34, pp. 1–2.

Bourquelot, Em., presents a contribution to the biochemical study of glucosides, hydrolyzable by emulsin.—Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 120–126. See also Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 296; Chem. & Drug. 1910, v. 77, p. 405; and Pharm. J. 1910, v. 31 (85), p. 412.

Rosenthaler, L., reviews the chemistry of glucosides in 1909.—Chem. Ztg., 1910, v. 34, pp. 329–330.

Lüders, R., reviews the progress made in the chemistry of alkaloids and glucosides during the year 1909.—*Ibid.* pp. 659–660.

Roure-Bertrand Fils (Sc. & Ind. Bull., October 1910 p. 149) review some of the recent literature relating to the chemistry of glucosides.

5. ALKALOIDS.

Bartlett, H. H., thinks that alkaloids should have the termination "um" in place of "a" so as to bring them in accord with the nomenclature of modern chemistry.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 87.

Oldberg, Oscar, thinks that the endings "ina" for the Latinic names of alkaloids and "inum" for "neutral principles" should stand, together with the terminations "ine" and "in" for the English, because they have a recognized practical value to both chemists and pharmacists. He is unable to find sufficient and consistent reasons for the titles "hydrochloride" and "hydrobromide" applied to the salts formed by the alkaloids with hydrochloric or hydrobromic acids.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 759–760.

Einbeck, Hans, reviews the progress in the chemistry of alkaloids during the year 1909.—Fortschr. d. Chem., 1910, v. 2, pp. 75–82.

Gössling, W., reviews the 1909 literature relating to the chemistry of alkaloids.—Chem. Ztg. 1910, v. 34, pp. 909–912; 917–918; 923–924.

Lüders, R., reviews the progress made in the chemistry of alkaloids and glucosides during the year 1909.

Shaefer, George L., has determined the solubilities of a number of alkaloidal salts in different solvents at different temperatures with results at variance with the figures given in the U. S. P.—Am. J. Pharm., 1910, v. 82, pp. 218–221.

Cohn, Georg, discusses some of the possible chemical combinations of alkaloids.—Pharm. Zentralh. 1910, v. 31, pp. 265 ff.

Rosenthaler and Görner report observations on the use of aromatic nitroderivatives, more particularly nitrophenols as precipitants for alkaloids.—Ztschr. anal. Chem., 1910, v. 49, pp. 340–358.

Shaer, Ed., reports observations on reactions of alkaloids with hydrogen peroxide.—Arch. Pharm., 1910, v. 248, pp. 458–462.

Thomlinson, J. C., reports observations on reactions with potassium permanganate.—Chem. News, 1910, v. 101, p. 83.

Klein, Fred., presents a table showing the color reactions of different alkaloids with concentrated sulphuric acid and a trace of sodium selenite (Na_2SeO_3).—J. Ind. & Eng. Chem., 1910, v. 2, p. 389.

Watanabe and Koshino call attention to several possible errors in the acidimetric determination of alkaloids. They find that an appreciable quantity of the acid used is retained by the mixture of chloroform and ether, also that filtration causes the loss of acid. They suggest omitting the use of filters wherever practicable.—J. Pharm. Soc. Japan, 1910, p. 821.

Elvove, Elias, reports the results of some further studies on the application of the Volhard method to the estimation of alkaloids.—J. Am. Chem. Soc., 1910, v. 32, pp. 132–139.

Runne, E., in a further contribution on the titration of alkaloid salts by the use of Poirrier's blue as an indicator, calls attention to the article by Messner (Ztschr. ang. Chem., 1903, p. 469), who suggests the use of this indicator in alcoholic solution for quinine salts.—Apoth. Ztg. 1910, v. 25, p. 137.

Howard and Stephenson report progress in the study of microchemical tests for alkaloids.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 189. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

A book review (Ber. d. pharm. Gesellsch., 1910, v. 20, p. 379) discusses a monograph on the natural bases by Ernst Winterstein and Georg Trier. See also J. Am. Chem. Soc., 1910, v. 32, pp. 1696–1698.

Chevalier, J., discusses the influence of cultivation on the alkaloid content of certain Solanaceæ.—Nouv. remedes. 1910, v. 26, pp. 97–100. See also Compt. rend. Acad. sc. 1910, v. 150, pp. 344–346.

Ranwez, F., discusses the influence of cultivation on alkaloidal content.—Ann. pharm. Louvain, 1910, v. 16, pp. 253–255.

Simon and Spillmann contribute an interesting note on the localization of the alkaloids in the blood; they think they form real and stable combinations with the leucocytes.—Compt. rend. Soc. Biol. 1910, v. 68, p. 553.

Brown, Linwood A., points out that alkaloids as a rule, are very stable bodies, though some are readily affected by light, alkalies, etc. None such should be dispensed if discolored to any extent.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 150.

Robinson, William J., discussing the incompatibilities of alkaloids, says: "Great care is necessary in prescribing these, because, many of them being potent drugs, precipitation may cause serious consequences, by an overdose of the alkaloid being poured out in one dose."—Critic and Guide, New York, v. 13, p. 135.

Solis-Cohen, Solomon, states that active principles should not displace the crude drug and galenical preparations, unless physicians in general all agree that the active principle is the only necessary or desirable preparation.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 493.

An editorial (N. A. R. D. Notes, 1910, v. 10, p. 164) advises considerable conservatism on the part of the advocates of the "active principle" system of medication. Alkaloids have their particular and specific uses in medicine, but no active principle has yet been able to replace in all cases the drug from which it is obtained.

6. ASSAY PROCESSES.

Schamelhout, A., recommends gravimetric methods of assay as being better adapted to the requirements of the apothecary.—Pharm. Ztg. 1910, v. 55, p. 731. See also Brit. & Col. Drug., Lond., 1910, v. 58, p. 215, Drug. Circ., 1910, v. 54, p. 600 and Compt. rend. Congr. Internat. Pharm. 1910 (Brussels 1911), pp. 3–12.

A resolution adopted by the 10th International Pharmaceutical Congress, held in Brussels in 1910, recommends international uniformity in the methods of assay.—Pharm. Post, 1910, v. 43, p. 726. Also J. pharm. Anvers. 1910, v. 66, p. 676.

Lyons, A. B., in discussing progress in standardization of pharmacopœial drugs, presents a table showing a comparison of pharmacopœial requirements, the standards and the method used in determining the alkaloidal content.—Am. Druggist, 1910, v. 56, pp. 103–105. See also Rev. Am. Farm. y Med., 1909–10, v. 14, p. 156 ff.

Dohme and Engelhardt, discuss the assay of opium, nux vomica and cinchona by the process given in eleven of the newer pharmacopœias, compared with those of the U. S. P. and the two older pharmacopœias, English and German the methods are given in detail.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 829–850.

Caesar & Loretz (Jahres-Ber., 1910, pp. 75–122) outline their own and discuss various official methods for the valuation of several important drugs.

Kottenhoff, G., (Rev. pharm. Flandres, 1909, v. 28, pp. 224–230) presents a critical review of the official methods of alkaloidal assay of the Ph. Belg.—Bull. sc. pharmacol. 1910, v. 17, p. 122.

An editorial (Am. Druggist, 1910, v. 57, p. 295) states that the new Russian Pharmacopœia provides assay processes for belladonna, hyoscyamus, ipecacuanha, nux vomica, aconite and opium. In the case of opium the morphine is precipitated and weighed, while the other assay processes are effected by titration.

A review of the Ph. Germ. V points out that in connection with all alkaloid containing drugs, for which reliable assay processes were known, these have been included.—Pharm. Ztg. 1910, v. 55, p. 1004.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5, [1910], 1911, pp. 8–11) review the assay processes of the Ph. Germ. V and point out that no uniform method is described, despite the fact that many of the methods evidence great similarity. They express the opinion that much space could have been saved by a single comprehensive article outlining the method of procedure.

Dunning, H. A. B., points out that in the Ph. Fr. V, assay processes are directed only for the preparations of drugs, not for drugs themselves.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1154.

Cook, E. Fullerton, states that assay processes are given only in a few cases in the foreign pharmacopœias, although where the International Conference has adopted an assay standard, this standard is usually a requirement.—*Ibid.* p. 1248.

Scoville, W. L., presents some comments on the alkaloidal assay methods of the U. S. P. and makes a number of suggestions for improving them.—*Ibid.* pp. 818–823.

Puckner, W. A., thinks that the U. S. P. assay methods as they stand are not always satisfactory, and that the defect is frequently due to the leaving out of important details in the original methods from which they were adapted.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 102.

Gordin, H. M., states that many of the U. S. P. methods of assay have been severely criticised and they undoubtedly need overhauling. He thinks that simplicity of operation and great exactness are of less importance than concordant results.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 122.

Lyons, A. B., discusses the assay processes of the U. S. P. VIII. He thinks that, for a number of the assays, a single process might be employed and described in detail in the appendix; and that, only in cases where such a model process required modification, would it be necessary to give in the body of the Pharmacopœia a detailed process.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 824–829.

Remington, Joseph P., is reported as pointing out that assay processes are being improved constantly and that variation in results can often be attributed to the personal equation.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 26.

LaWall, Chas. H., agrees that the assay processes are in the formative stage and that the results of the present processes are but an approximation. One cause of variation is the uncertain method of sampling crude drugs.—*Ibid.* p. 26.

Lyons, A. B., presents a number of criticisms on the assay process for organic drugs, and calls attention to some of the innovations in the general plan of alkaloidal assay as embodied in some of the new pharmacopœias.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 776.

Horn, Graham and Rosengarten report on the chemical assays of the U. S. P., and make a number of suggestions for modifying the tests and requirements.—Bull. Am. Pharm. Ass., 1910, v. 5, pp. 562–565.

The American Pharmaceutical Association approves the recommendation: "That the assay processes be extended to all drugs and preparations permitting of satisfactory testing in this way, and that identity tests for the purity of the isolated active principle be included wherever possible.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 537.

Clark, Albert H., reviews the assay methods of the U. S. P.—Bull. Am. Pharm. Ass., 1910, v. 5, pp. 122–124, 101 and Western Druggist, 1910, v. 32, pp. 57–58.

England, Joseph W., thinks that the next revision of the U. S. P. should provide for flexibility in the standard for alkaloid-bearing drugs. He points out the difficulty of achieving uniform results in assay work, and says a limit of variation of 15 per cent would seem a fair allowance.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 25.

Eliel, Leo, thinks it desirable to have the Pharmacopœia give full and detailed information regarding tests and assay methods, so as to give the most effective aid to both pharmacist and physician.—*Ibid.* p. 102.

Vanderkleed, Charles E., thinks it will never be possible to give explicit directions for carrying out an assay which will in different hands give exactly concordant results. He thinks one of the troubles in the Pharmacopœia is that we try to give too explicit directions, and do not give enough leeway.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 855.

Puckner, W. A., thinks that pharmaceutical assay methods must be followed accurately, in order to avoid different results, and the details must be made more explicit.—*Ibid.* p. 855.

Seil, H. A., expresses the belief that complete extraction is fundamentally essential in drug assay.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 83.

Lyons, A. B., thinks that the paragraph on alkaloidal assay by immiscible solvents, p. 578 of the present Pharmacopœia, should be rewritten and should include a general assay process in full detail (a) for crude drugs and (b) for fluid extracts.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 776.

Remington, Roe E., discusses the use of immiscible solvents and calls attention to some possible errors.—J. Ind. & Eng. Chem., 1910, v. 2, p. 546.

Seidell, Atherton, reports on the distribution of alkaloids between immiscible solvents and its bearing upon assay processes. He points out that the amount of alkaloid which goes into the chloroform layer may be only 12 to 25 times the amount remaining in the aqueous layer, thus giving the possibility of an error of 4 to 8 per cent of the actual amount present.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1031–1035.

Katz, J., reports on a new method for estimating quinine in drugs and preparations by titration, using Poirer's blue as an indicator.—Ber. d. pharm. Gesellsch., 1910, v. 20, pp. 316–320.

Elvove, E., presents results showing that the Volhard method is also applicable to cocaine, narcotine, hydrastine, philocarpine and brucine.—J. Am. Chem. Soc., 1910, v. 32, pp. 132–139.

Howard and Stephenson report progress in the study of microchemical tests for alkaloids.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 189. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Roberts, J. G., describes and illustrates a rack for holding separatory funnels.—Am. J. Pharm. 1910, v. 82, p. 373.

Fanto and Stritar discuss the nature of agitation emulsions and the possibility of inducing separation by various physical means.—J. prakt. Chem., 1910, v. 81, pp. 564–568.

Javillier contributes an article on the silicotungstates of sparteine and atropine, which possess the advantages of being insoluble and having higher molecular weights than the alkaloids themselves.—Bull. sc. pharmacol. 1910, v. 17, pp. 315–320.

Bierling, Pape and Viehöfer report comparative and critical studies of the several available methods of assay for coca. The several methods are outlined and commented upon.—Arch. d. Pharm., 1910 v. 248, pp. 303–336.

Kilmer, Frederick B., discusses the assay of medicinal plasters.—J. Ind. & Eng. Chem., 1910, v. 2, pp. 94–97.

Scoville, W. L., states that old preparations of mydriatic drugs are much more difficult to assay than fresh preparations, particularly the leaf preparations, and require the use of alcohol during the process of extracting the alkaloids.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 883.

Sievers, A. F., presents some practical suggestions on the use of mydriatic alkaloids, the precautions to be observed, and discusses methods for avoiding the difficulties frequently encountered.—Merck's Rep., 1910, v. 19, p. 215.

Carlinfanti, E., makes a contribution to the study of certain narcotic extracts.—Boll. chim. farm. 1910, v. 49, pp. 919–930.

Goeckel, Henry J., reports the results of a few drug assays and the results of 87 opium assays and 60 coca assays. He thinks that the divergent results obtained by different assayers and by pharmacists who take the trouble to assay their supplies can be at times accounted for by the fact that, through changed conditions in transit or in storage, the moisture content of the drug varies and will be most noticeable.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1047–1053.

Vanderkleed, Chas. E., presents a table showing the results of 340 drug assays made under his supervision. He points out that this table shows a marked improvement, fully 85 per cent of the drugs examined being above standard.—Proc. Pennsylvania Pharm. Ass., 1910, p. 147.

Kebler, Lyman F., reviews the present status of drug assays and presents a number of tables showing the results obtained by different analysts using the same and different methods.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 856–871.

Beal, George D., states that there is often found a great variation in the results of assays made by different chemists. Many of these variations are hardly excusable as the rate of deterioration is not such as to cause a rapid change in strength.—Proc. Ohio Pharm. Ass., 1910, p. 71.

Hoover, G. W., in a report of medicinal plants and drugs, calls attention to the variations in results in connection with the cooperative work on the assay of alkaloid containing drugs.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., pp. 181–183. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Barnard, H. E., comments on the lack of care exercised by wholesale as well as retail druggists in making pharmaceutical preparations, and calls attention to a number of assays made under his supervision which demonstrate a variability altogether too great to be permissible.—Proc. Indiana Pharm. Ass., 1910, pp. 55–56.

7. PHYSIOLOGICAL STANDARDIZATION.

Goodall, Alexander, discusses the physiological standardization of drugs, with special reference to digitalis, strophanthus, squill and ergot.—Chem. & Drug. 1910, v. 76, p. 193. See also Pharm. J. 1910, v. 30 (84), p. 112.

Githens and Vanderkleed discuss the physiologic standardization of cardiac stimulants and depressants, and present a comparison of such standardization with some results obtained by chemical assay.—

Am. J. Pharm. 1910, v. 82, pp. 453–465. See also Proc. Am. Pharm. Ass. 1910, v. 58, pp. 913–924.

Hale, Worth, discusses the variability of digitalis, and concludes that the first year leaves are not necessarily weaker than second year leaves; and that there is not necessarily any difference in the activity of wild and garden grown leaves.—*Ibid.* pp. 924–929.

Hatcher and Brody discuss the biological standardization of drugs and report the results obtained. They conclude that the cat affords a simple method of standardizing the drugs of the digitalis group, and is available for the pharmacist who will devote as much care to the process as required by the chemical assay of opium.—Am. J. Pharm. 1910, v. 82, pp. 360–372. See also Proc. Am. Pharm. Ass., 1910, v. 58, pp. 929–939.

Wood, H. C., Jr., presents the report of a committee on physiological assay and discusses standards for ergot, aconite, cannabis, and the digitalis group.—*Ibid.* pp. 939–943. See also Am. J. Pharm. 1910, v. 82, pp. 101–112.

Houghton, E. M., discusses a number of suggestions on the physiological standardization of drugs, and points out the desirability of including physiological assays in the next edition of the U. S. P.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 943–945.

Kraemer, Henry, in reporting the symposium on physiological testing held in connection with the meeting of the American Pharmaceutical Association, states that this was one of the important events of the meeting. The papers and discussion were suggestive, inspiring and forceful.—Am. J. Pharm. 1910, v. 82, p. 291.

The American Pharmaceutical Association is reported as adopting a resolution favoring the recommendation of the physiological standardization of drugs to the serious consideration of the United States Pharmacopœial Convention.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 547.

Puckner, W. A., discusses the subject of physiologic standardization as defined by the Council of Pharmacy and Chemistry.—J. Am. M. Ass., 1910, v. 54, p. 718. Also Rep. Council Pharm. & Chem., 1910, pp. 38–40.

The Medical Society of the State of New York recommends that methods of physiological assay be introduced where necessary for proper standardization of organic drugs.—Drug. Circ., 1910, v. 54, p. 255.

An editorial (Bull. Am. Pharm. Ass., 1910, v. 5, p. 223) states that it would be premature to establish physiologic standards, especially since these are based upon the action on lower animals, in which there is a great distinction as compared with human beings.

Fantus, Bernard, thinks that the introduction of physiological assay methods would serve to distinguish an active drug and preparation from a worthless or comparatively inert one.—*Ibid.*, p. 154.

Francis, J. M., notes that the Revision Committee was instructed to consider very carefully the varying methods of physiological testing and to include these in the Pharmacopœia wherever they are found to be reliable and practicable.—Proc. Michigan Pharm. Ass., 1910, p. 45.

Focke, C., describes his short time injection method for the physiological valuation of digitalis and strophanthus.—Arch. d. Pharm., 1910, v. 248, pp. 345–364.

Baumgarten, G., thinks that physiological assaying should be extended wherever it is possible, and at the same time practicable without making the price of the drug prohibitive.—Western Druggist, 1910, v. 32, p. 16.

Caesar & Loretz (Jahres-Ber. 1910, p. 5) report that they have extended their physiological standardization to *Adonis vernalis* and *Convallaria majalis*, in addition to digitalis and strophanthus.

Ransom, Francis, comments on the introduction of physiological tests for such drugs as cannabis, digitalis, squill, and strophanthus.—Pharm. J. 1910, v. 31 (85), p. 166.

Lyman, Rufus A., discusses the introduction of experimental pharmacology as an essential in the pharmaceutical curriculum.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 707–712.

See also editorial Pharm. J., 1910, v. 31 (85), p. 602.

An editorial (Chem. & Drug. 1910, v. 76, p. 20) quotes the conclusion of J. U. Lloyd that the standard of pharmaceutical excellence does not necessarily reside in the one toxic agent, but is to be found in the balanced structure of the preparation's evolution from the crude drug. Nor does therapeutic excellence necessarily rest in an overload of a dominating, over-conspicuous toxic constituent of a drug.

''A. O. H.'' commenting on the above, recognizes Lloyd as a poet and a man of genius but thinks he will have some difficulty in turning back the hands of the pharmacopœial clocks that have been set to ''standardized'' time.—*Ibid.* p. 62.

Carmichael, T. H., asserts that a rational system of materia medica and therapeutics cannot be established upon experiments on animals. * * * Drug pathogenesis founded upon experiments on the lower animals is too limited in its scope. At best it can but furnish the crude physiologic effects of drugs, and even here care must be observed that the animals employed should not be physiologically different among themselves or from man. Therefore, without depreciating whatever knowledge has been derived from experiments on animals, it is evident that it is insufficient for the demands of a scientific materia medica.—J. Am. Inst. Homœop. 1910, v. 2, pp. 262–263.

7. PHARMACEUTICAL PREPARATIONS.

Bergh, Gustaf Fr., presents a contribution to the history of Galen and Galenical preparations.—Svensk farm. Tidskr., 1910, v. 14, pp. 1–7, 29–37.

Hallberg, C. S. N., states that the nomenclature of the pharmaceutical preparations is of the utmost importance and, in view of the constant attempts at its corruption, adherence should be insisted on.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 764.

Wulff, C., calls attention to the characteristic features of the galenical preparations included in the Ph. Ital. III.—Apoth. Ztg., 1910, v. 25, pp. 907–910; 918–920.

Wilbert, M. I., points out that, in regard to the drug strength of several preparations, the U. S. P. agrees fairly well with the requirements of the Brussels Protocol; but apart from this single requirement differs more widely from the actual requirements than any one of the other national pharmacopœias.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1144.

Raubenheimer, Otto, states that the odor and especially the color of a great many galenical preparations used on the Continent of Europe differ largely from the U. S. P. preparations.—*Ibid.* p. 1138.

Gane, E. H., presents a table which shows the principal point of difference between the galenicals common to the Ph. Brit. and the U. S. P.—*Ibid.* pp. 1163–66.

Kebler, Lyman F., reports the opinion that preservatives other than alcohol and glycerin should not be used in the N. F. preparations.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 147. See also *Ibid.* p. 210.

Long, Eli H., thinks that a number of galenical preparations are superfluous. With discrimination, some of the time-honored preparations could be dismissed, being fully replaced by better ones.—Western Druggist, 1910, v. 32, p. 18.

Osborne, Oliver T., recommends that the 1910 Pharmacopœia give official approval only to the best of the preparations of the official galenic drugs, and not officialize the little used and useless preparations of these drugs.—J. Am. M. Ass., 1910, v. 54, p. 50.

The Medical Society of the State of New York recommends that preparations of drugs be limited so as to avoid unnecessary multiplication of those of similar character or action.—Drug. Circ., 1910, v. 54, p. 255.

Kebler, Lyman F., reports the opinion that all complex preparations, such as vegetable cathartic pills, compound tincture of cardamom, etc., should find a place in the National Formulary, and that whatever the National Formulary might require in the nature of a simple drug should be included in the United States Pharmacopœia.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 145.

Wiley, H. W., points out that medical men are gradually recognizing the fallacy of expecting to secure what might be termed mass effects by the use of complex mixtures, and that the trend at the present time is to prescribe simple medicaments for the purpose of securing definite effects.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 12.

Solis-Cohen, Solomon, thinks that with a few notable exceptions even non-proprietary mixtures are, and should be, excluded from the Pharmacopœia. Their place is the National Formulary.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 489.

Weinstein, Abraham, expresses the hope that the next Revision Committee will direct their efforts solely to improve the already too many complicated preparations which crowd the pages of our official books.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1279.

Beates, Henry, thinks the entire galenic materia medica is seriously affected by the conspicuous absence of official preparations made according to physiologic standardization.—J. Am. M. Ass., 1910, v. 54, p. 439.

Kebler, Lyman F., reports the opinion that medicinal tipples should be eliminated from the National Formulary.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 146. See also *Ibid.* p. 210.

Seltzer, Leonard A., reports resolutions adopted by a joint meeting of physicians and druggists in Detroit, which declare that the apparent duplication of substances such as wines, vinegars, tinctures and fluid extracts is not objectionable; and that fixed formulas for mixtures should be discouraged.—Bull. Pharm. 1910, v. 24, p. 168.

Raubenheimer, Otto, censures manufacturing houses for printing on the labels of their fluid extracts not only formulas for the extemporaneous preparation of syrups, tinctures and wines, but even infusions.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1091.

Hereth, F. S., discusses the printing of directions for making tinctures, syrups, etc., from fluid extracts, and asserts that this practice has grown out of demands made on manufacturers by customers.—Practical Druggist, 1910, v. 28, p. 63.

Dulière, W., presented a paper at the International Congress of Pharmacy, Brussels, on the advisability of pharmacists preparing their own galenicals. An outline is given in Chem. & Drug., 1910, v. 77, p. 405.

The Brussels Congress adopted a resolution that the pharmacist should himself, in so far as possible, prepare his own galenicals.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 292.

Anselmino, O., commenting on the Ph. Germ. V. asserted that the pharmacists stood or fell with the question of the personal preparation of galenicals: "If the pharmacist wishes merely to act as a trader by selling ready-made preparations, then why this agitation for a higher education? Either remain a pharmacist, by exercising the profession, or become a tradesman.—Chem. & Drug. 1910, v. 77, p. 892.

Beringer, George M., thinks that pharmacists should insist that preparations be made direct from the drug and that much of the slipshod, lazy work that is so detrimental to the present standing of the profession is due to the neglect of this fundamental principle of the pharmacists' calling.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 782.

Patch, Edgar L., points out that reports of convictions in different sections demonstrate that due care is not exercised in making simple pharmaceuticals. Preparations that are simple solutions, like tincture of iodine, spirit of camphor, liniment of camphor, spirit of anise, spirit of peppermint, etc., have been found of only 10–16 per cent the official strength.—*Ibid.* p. 740.

The Pharmacist to the Local Government Board for Ireland, in his report for the year ending March 31, 1910, states that the galenical preparations were prepared with care and were in close accord with the standards laid down. The number of samples examined was 8,900, of which 115 were unfavorably reported on.—Pharm. J. 1910, v. 31, (85), p. 411.

Gordin, H. M., thinks that unscrupulous manufacturers could make preparations meeting the present pharmacopœial requirements at one-fifth the cost of the same preparation when made by the method laid down by the Pharmacopœia.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 102.

An unsigned note (Chem. & Drug. 1910, v. 77, p. 23) states that under the name of "Intraits-Dausse," or "complete physiologic extracts," a process is given in the *Bulletin des Syndicats Pharm. de l'Est*, by which it is claimed extracts can be produced which more nearly represent the plant than the ordinary galenical extracts.

Dohme, A. R. L., is reported as having confirmed statements of other observers, that there is no rapid deterioration in preparations of alkaloidal drugs, except in the case of coca, aconite and physostigma, while the change in these is not appreciable within six months.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 740.

Thum, John K., suggests that the description of each crude drug be followed by a list of the official preparations into which it enters.—Am. J. Pharm. 1910, v. 82, p. 202.

1. GENERAL FORMULAS.

Cook, E. Fullerton, points out that in foreign pharmacopœias a general article outlining the several processes usually precedes a class, or is given elsewhere in the book, and then reference is made under each tincture to the particular type process to be followed.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1247.

A review of the Ph. Germ. V (Pharm. Ztg. 1910, v. 55, p. 1004) points out that the general directions for carrying out the several requirements and tests of this Pharmacopœia are, when taken all in all, presented in a concise and satisfactory manner.

An editorial (Nat. Druggist, 1910, v. 40, p. 111) suggests that a general description of percolation be given at the head of tinctures, fluid extracts and other extractive preparations, and that in connection with the several formulas only such details regarding the menstruum and special manipulative data as are necessary to make the process to be followed clear to the reader.

Hynson, Henry P., calls attention to some of the introductory notes of the N. F. and expresses the belief that they are generally insufficient, almost dangerous for those who need such instruction, and offensively gratuitous to those who might successfully follow them.—Midl. Drug., 1910, v. 44, p. 486.

The Pittsburgh Branch of the A. Ph. A. does not approve of the recommendations to eliminate from the National Formulary the preliminary notes and general formulas.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 157.

Kebler, Lyman F., reports the opinion that introductory notes, comments and general formulas are desirable.—*Ibid.* p. 146. See also p. 210.

Diehl, C. Lewis, reports that "Introductory Notes" to certain classes of preparations are not considered objectionable and are to be retained in a properly revised form.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 526.

An editorial (Bull. Am. Pharm. Ass., 1910, v. 5, p. 6) expresses the opinion that the general formulas of the National Formulary and directions as for coating pills, etc., have a value as pointed out by Kalusowski to the Washington Branch. The coating of chocolate, for example, should, according to the N. F., consist of cacao and not of burnt umber, talc, etc.

The Kings County Pharmaceutical Society recommends that general type formulas be adopted.—Drug. Circ., 1910, v. 54, p. 254. See also Am. Druggist, 1910, v. 56, p. 255.

Members of the Chicago Branch of the A. Ph. A. recommend the introduction of general processes and formulas which would reduce the amount of space given to the present details of pharmaceutical operations.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 297.

The American Pharmaceutical Association approves the recommendation: "That type processes and general formulas be introduced, wherever possible, so as to prevent useless repetition in the text of formulas."—Proc. Am. Pharm. Ass. 1910, v. 58, p. 538.

Taylor, Augustus C., thinks that the perfecting of a formula is like the making of a proverb. "It has been well said, 'No one man can make a proverb', he can be the author of an original saying, but the proverb must be the creature of popular suffrage. Just so with the formula, it must be perfected by popular suffrage."—Bull. Am. Pharm. Ass., 1910, v. 5, p. 13.

FORMS OF MEDICAMENTS.

Wiley, Harvey W., thinks there is a just prejudice forming, not only among the laity but in professional circles, against elaborately compounded articles consisting of a very great many different substances. These articles seem to be prepared with an idea that there may be something in the compound which will hit the mark. It might be very properly called "shotgun" pharmacy and "shotgun" therapeutics.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 606.

Stanislaus, I. V. S., thinks that the cry for simples and the criticism of mixtures is untimely and that if the pharmacist fails to produce them he simply plays into the specialty manufacturers' hands.—*Ibid.* p. 161.

An editorial (N. A. R. D. Notes, 1910, v. 10, p. 163) suggests that all complex preparations, like compound mixtures, compound syrups, etc., be transferred from the Pharmacopœia to the National Formulary.

Emanuel, Louis, presents formulas for several preparations to be used as vehicles.—Bull. Am. Pharm. Ass., 1910, v. 5, pp. 125–126. Also Midl. Drug., 1910, v. 44, pp. 32–33.

White, William R., discusses the use of kerosene in pharmacy, and presents a number of formulas for external applications and sprays.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1129–31.

2. CHANGES IN STRENGTH.

Hill, W. B., recommends a change of strength of galenical preparations so as to give a more uniform table of dosage.—Western Druggist, 1910, v. 32, p. 17.

Beringer, George M., thinks that caution should be exercised in changing the established formulas of the N. F.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 220.

An editorial (Drug Topics, 1910, v. 25, p. 178) discusses permissible variations in the strength of volatile pharmaceuticals.

The Committee on Adulterations points out that light and heat often produce chemical changes. Drugs, chemicals and pharmaceutical preparations deteriorate on standing. The chemist, the master of chemical elements, cannot as yet master the elements of nature. Slight deteriorations may in some cases be permissible, but deterioration impairing the value of the medicament, should not be allowed at any cost.—Proc. New York Pharm. Ass., 1910, p. 167.

Dohme and Engelhardt report a continuance of their experiments on the stability of fluid extracts containing alkaloids.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 872–873.

Scoville, W. L., reports observations on the permanence of alkaloidal fluid extracts and tinctures, and presents a table giving his results of assays during a period of from one to three years.—*Ibid.* pp. 874–883.

3. STANDARDIZATION.

An abstract, of the contributions of Schamelhout and Bourquelot on methods of standardization, is reproduced in Pharm. J. (1910, v. 31 (85), p. 344).

Ransom, Francis, discusses the desirability of a comprehensive investigation of the properties of galenical preparations.—Year-Book of Pharmacy, 1910, pp. 318–321. See also Chem. Abstr., 1191, v. 5, p. 563.

Gordin, H. M., discusses the methods of testing the identity and purity of pharmacopœial substances, and points out more particularly the need for introducing standards for galenical preparations.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 121–122. Also Merck's Rep., 1910, v. 19, pp. 98–99.

Kraemer, Henry, in a review of the Ph. Ndl., points out that under the various galenicals, as tinctures, data are given for their identification and tests of purity, such as color, specific gravity, amount of extract, also certain specific tests.—Am. J. Pharm. 1910, v. 82, p. 524.

Frey, Otto, discusses the rapid valuation of galenical preparations and outlines methods of assay, with particular reference to the use of methyl red as an indicator.—Ztschr. allg. österr. Apoth.-Ver., 1910, v. 48, pp. 393, 403, 425, 437.

Lyons, A. B., thinks that in the assay processes for different preparations of the same drug, details as far as possible should be carried out in precisely the same manner, and the directions should be given in the same words.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 776.

Kraemer, Henry, speaking of the proposals to standardize the finished products, points out that assay methods are as yet incomplete, and that galenical preparations of drugs do not depend for their activity on the action of any one ingredient.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 86.

The City of Washington Branch of the A. Ph. A. believes that it would be preferable to have a definite standard prescribed, when practicable, for each product recognized in the National Formulary.—*Ibid.* p. 210.

Cook, E. Fullerton, points out that one of the peculiarities of some of the foreign pharmacopœias is the introduction of identity tests based upon color, odor and taste.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1248.

The Kings County Pharmaceutical Society recommends that tests be given for the identity, purity and strength of galenicals in the next U. S. P.—Drug. Circ., 1910, v. 54, p. 254.

Needham, R. H., thinks that color standards are of great importance, and the National Formulary preparations should be of uniform color when made by different manufacturers.—Proc. Texas Pharm. Ass., 1910, p. 69.

LaWall, Charles H., thinks that physical descriptions for galenical preparations should be included in the N. F.; also suggests that a color standard be adopted.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 221.

Lichthardt, G. H. P., asserts that we must remember that all do not see colors alike and that a description of a color is a delusion and a snare. To overcome the difficulties involved he suggests that a standard color card be adopted and used.—Pacific Pharmacist, San Francisco, 1909–10, v. 4, p. 86.

Hommell, Philemon E., thinks that the U. S. P. should direct the specific gravity of tinctures and also the extract content.—Western Druggist, 1910, v. 32, p. 483.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, pp. 34–39) present a table showing the proposed standards, ranges of specific gravity, and range of percentage by volume of alcohol for galenical preparations included in the Ph. Brit.

Kunze discusses the examination of drugs and galenical preparations and presents several tables showing the results of examinations made by him.—Pharm. Ztg., 1910, v. 55, pp. 157–158.

An editorial (Lancet 1910, v. 178, p. 316) asserts that it is important that the physiological method of appraising the activity of drugs which at present can not be assayed by chemical means, should be properly appreciated. Attention is called to the recent paper of William Martin who thinks that the time is not yet ripe for the introduction of tests of this kind into the Ph. Brit., unless they be made permissive and not mandatory.

Weinstein, Joseph, favors the official recognition of synonyms, standards and assay processes for galenicals.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 84.

4. REQUIREMENTS.

Raubenheimer, Otto, points out that a review of foreign pharmacopœias impresses one with the fact that physical descriptions of galenicals are quite complete. These serve as a guide to practical dispensing pharmacists and should be included in the coming U. S. P. revision.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1139.

Coblentz, Virgil, thinks it desirable that the Pharmacopœia give under each galenical a statement of the percentage of alcohol, in compliance with Government requirements for interstate commerce. He comments on the difficulties entailed by the varying moisture content of different drugs.—Proc. Maine Pharm. Ass., 1910, p. 45.

See also Proc. Texas Pharm. Ass., 1910, p. 71.

Francis, J. M., thinks that including requirements for the alcohol content of galenical preparations in the Pharmacopœia would prove irksome to the retail druggist, who would find it a pretty complex problem, and a very expensive process.—Proc. Am. Pharm. Ass., 1910, v. 48, p. 815.

An editorial (N. A. R. D. Notes, 1910–11, v. 11, p. 126) points out that there is no offhand method for determining the exact alcohol content of any official preparation. This can only be ascertained by careful test.

The Kings County Pharmaceutical Society recommends that physical descriptions of galenicals be given.—Drug. Circ., 1910, v. 54, p. 254. See also Am. Druggist, 1910, v. 56, p. 255.

The members of the Denver Branch think that pharmacopœial descriptions of galenicals would be an aid to physicians, pharmacists and food authorities.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 284.

Davis, Charles H., thinks that the proposed introduction in the text of each preparation, of a note describing the physical appearance of the preparation, will be extremely useful to pharmacists, and probably the most appreciated of any of the improvements.—Proc. Maine Pharm. Ass., 1910, p. 40.

The American Pharmaceutical Association approves the recommendation, that terse and concise descriptions of the official preparations be given after each formula.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 538.

5. GALENICALS.

Dulière, W., discusses the desirability of making galenical preparations in the laboratory of the pharmacy.—Pharm. Post, 1910, v. 43, pp. 698, 726. See also Pharm. Ztg., 1910, v. 55, p. 745, and Compt. rend. Congr. Internat. Pharm., 1910, (Brussels, 1911), pp. 47–49, 249–252.

Raubenheimer, Otto, thinks that the pharmacist, in order to preserve the name, should prepare his own galenicals, and asserts that 75 per cent of the druggists in the United States buy practically all their galenical preparations, including such simples as paregoric, spirit of peppermint and tincture of ginger.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1091.

Beal, James H., in discussing the desirability of pharmacists making their own galenical preparations, expresses the belief that the

Committee of Revision of the U. S. P. can do no more useful thing than to include as large a number as possible of easily workable formulas of preparations which must be sold by retail druggists. He adds "The extent to which retail druggists have ceased to manufacture pharmaceutical preparations is alarming."—Proc. Missouri Pharm. Ass., 1910, p. 29.

A number of contributors discuss the question as to what candidates for registration should know about galenical formulas.—Midl. Drug., 1910, v. 43, pp. 712–717.

Raubenheimer, Otto, points out that a review of foreign pharmacopœias impresses one with the short and precise directions for manipulations in the preparation of their galenicals. He thinks explicit directions and unnecessary repetitions in our present U. S. P. could well be dismissed and given a place in the dispensatories or commentaries.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1139.

Francis, J. M., thinks that nowhere in the world has the study of liquid preparations received the development it has in the United States. He would dislike very much to see the U. S. P. take a backward step as a mere matter of expediency, governing the determination of menstrua and process for a preparation.—*Ibid.* p. 799.

Tassily, E., reports observations on the use of refrigeration in the making of pharmaceutical preparations.—Pharm. Post, 1910, v. 43, pp. 849–851.

See also Lescardé, F., Chem. Ztg., 1910, v. 34, p. 1298.

Beal, George D., in the report of the committee on adulteration, points out that many cases of marked deficiency in strength of common pharmaceuticals seem to be due to carelessness in manufacture rather than deliberate attempts to defraud.—Proc. Ohio Pharm. Ass., 1910, p. 71.

Wiley, Harvey W., thinks it desirable to have as few preparations as possible containing the same ingredients.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 603. See also *Ibid.* p. 15.

Osborne, Oliver T., recommends that the 1910 Pharmacopœia give official approval only to the best of the preparations of the official galenic drugs, and not officialize the little used and useless preparations of these drugs.—*Ibid.* p. 235.

Solis-Cohen, Solomon, states that many preparations of one drug are permissible, when desired by physicians in general.—*Ibid.* p. 493.

Carmichael, T. H., quotes a non-homœopathic writer to the effect that many of the therapeutic actions in small doses cannot be obtained with the fluid extracts and tinctures made in the usual manner owing to the almost entire absence of certain volatile constituents.—J. Am. Inst. Homœp. 1910, v. 2, p. 265.

6. DECOMPOSITION.

Brown, Linwood A., in Bull. No. 150 of the Kentucky Agricultural Experiment Station of the State University (Lexington, Kentucky, 1910, pp. 125–128) discusses the preservation of drugs, calls attention to the requirements made by the U. S. P. and reports a number of observations on additional precautions to be observed.—See also Proc. Kentucky Pharm. Ass., 1910, p. 93.

An editorial (Am. Druggist, 1910, v. 56, p. 3) calls attention to several recent reports on the stability of galenical preparations and the conclusions published.

Rosengarten, George D., points out that deterioration is a condition which arises where the natural and unavoidable change in many chemicals is concerned. He enumerates a number of articles that are affected by such changes in spite of all precautions.—Am. J. Pharm. 1910, v. 82, p. 30.

Hemm, Francis, calls attention to the need of care in preserving drugs of animal origin.—Proc. Missouri Pharm. Ass. 1910, p. 103.

Kahn, Joseph, points out that light and heat are potent factors in the deterioration of drugs, chemicals and pharmaceutical preparations.—D.-A. Apoth. Ztg., 1910–11, v. 31, p. 57.

An editorial (N. A. R. D. Notes, 1910–11, v. 11, p. 129) states that the action of light on nearly all solutions of vegetable principles is injurious, and preparations of this type, particularly tinctures, should be stored and preserved in amber colored bottles.

Raubenheimer, Otto, favors the inclusion in the U. S. P. of directions for keeping drugs, chemicals and preparations.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 84. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1091.

Hommell, Philemon E., thinks that the U. S. P. should give directions for storing tinctures so as to prevent action by changes in temperature. He also thinks that the U. S. P. should direct the specific gravity of tinctures and the extract content.—Western Druggist, 1910, v. 32, p. 483.

The Kings County Pharmaceutical Society recommends that more attention be given to the preservation of drugs, chemicals and galenicals in the next U. S. P.—Drug. Circ., 1910, v. 54, p. 254. Also Am. Druggist, 1910, v. 56, p. 255.

Members of the Chicago Branch of the A. Ph. A. recommend that a classification of methods of storing and preservation be adopted, and in this connection an interesting discussion was entered into concerning methods of storing and preserving powdered drugs and herbs.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 297.

The American Pharmaceutical Association approves the recommendation, that instructions be incorporated for the proper storing of each article and methods of preventing deterioration.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 537.

Needham, R. H., thinks that the length of time each preparation sustains its pharmaceutical fitness should be stated in the N. F.—Proc. Texas Pharm. Ass., 1910, p. 71.

An unsigned article on the Ph. Germ. V enumerates and comments on the changes in directions for keeping the several official articles. Pharm. Ztg. 1910, v. 55, pp. 1024–1025.

Brown, L. A., thinks the use of fancy glass-labeled bottles is an abomination in the drug store. They ought to be put in the ash barrel. He points out that many of the stoppers fit badly and will not even prevent the vapor on a warm day from raising the stopper in the bottle.—Proc. Kentucky Pharm. Ass., 1910, p. 93.

Jacobsen, C., reports observations on the alkalinity of glass containers, and calls attention to the possible influence on pharmaceutical preparations.—Apoth. Ztg., 1910, v. 25, p. 262.

See also Lesure, J. pharm. et chim. 1910, v. 1, pp. 66–73, 119–126, and Pharm. J. 1910, v. 30 [84], p. 357.

Lesure, A., presents a communication on the action of the ultra violet rays on certain solutions employed in pharmacy, testing solutions of 24 different substances and using the Cooper-Hewitt lamp (3 amperes, 110 volts).—Nouv. remèdes, 1910, v. 26, p. 301.

The Kings County Pharmaceutical Society recommends that a time limit be fixed for the fluid extracts of coca, digitalis, and colchicum and for aspidium.—Drug. Circ., 1910, v. 54, p. 254.

An editorial note (Bull. Pharm. 1910, v. 24, p. 8) notes that the suggestion of the New York City Board of Health, that tinctures and fluid-extracts bear a time limit label, has not been pushed, doubtless for the very good reason that the board has found its position untenable and has discovered that deterioration plays after all a very small role. The importance of the caution that preparations be kept under proper conditions is emphasized. See also *Ibid.* p. 30.

Jeancard and Satie point out that for each essential oil the U. S. P. VIII states that it is to be kept in colored bottles, well stoppered, kept in a cool place, not exposed to light. The repetition of this precaution is useless and should be suppressed. The Ph. Fr. states these precautions once and for all in the generalities on essential oils.—Am. Perf. 1910–11, v. 5, p. 141.

7. INCOMPATIBILITY.

Thum, John K., asserts that all clarifying powders absorb color and flavor and should therefore be used with caution.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 254.

Raubenheimer, Otto, recommends that the dispensing pharmacist devote some time to the study of incompatibility, which is very useful behind the prescription counter.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1091.

The Medical Society of the State of New York recommends that incompatibles be mentioned, as far as practicable for each drug and preparation.—Drug. Circ., 1910, v. 54, p. 255.

Robinson, William J., calls attention to the incompatibilities of the more important remedies.—Critic and Guide, New York, v. 13, pp. 134–136.

Tait, J., contributes a note on the incompatibility of a prescription containing potassium iodide, dilute hydrobromic acid and chloroform water.—Pharm. J., 1910, v. 30 (84), p. 406.

McEwan, Donald, discusses an ethyl nitrite and potassium chlorate mixture which he characterizes as an example of chemical incompatibility giving a physiologically inert mixture and presenting a difficulty for which no remedy can be suggested.—*Ibid.* p. 404

8. PERCOLATION.

Raubenheimer, Otto, presents a history of maceration and percolation, with a bibliography of the more important articles on the subject.—Am. J. Pharm. 1910, v. 82, pp. 32–42.

Keenan, Thomas J., in a contribution to the study of maceration and percolation, reviews the history of percolation and calls attention to a number of papers on this subject.—Am. Druggist, N. Y., 1910, v. 56, pp. 73–76.

Flowers, Hiland, reports some experimental work in pressure percolation, and describes and illustrates his pressure percolator.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1253–56.

Beringer, G. M., favors interrupted percolation, using the official method but stopping the percolation twice, or oftener, for 24 or 48 hours. He criticises the variation in time of maceration directed in several of the official processes.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 152.

Diekman, G. C., thinks that maceration is better adapted to every day drug store use, because of its requiring less expert manipulation. He thinks that the official directions for percolation would be improved if in many instances the end-point were more definitely stated.—*Ibid.* p. 152.

Raubenheimer, Otto, thinks that maceration has the advantage of being easier to carry out, and that there is less loss of alcohol from the menstruum through evaporation. Its drawbacks are the time consumed, the loss of menstruum retained in the marc, and the indefinite amount of product.—*Ibid.* p. 152.

Remington, J. P., thinks it inadvisable to use either maceration or percolation to the exclusion of the other, for in some instances the best results are obtained by percolation; in others by maceration.—*Ibid.* p. 151.

Lloyd, John Uri, thinks that the difference between maceration and percolation is largely one of words only, a distinction more apparent than real. They are complementary processes, each one incomplete without the other.—*Ibid.* p. 151.

Cook, E. Fullerton, states that in the U. S. P. the percolation process is usually directed while in foreign pharmacopœias maceration is given the preference.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1247.

The members of the New England Branch of the A. Ph. A. think that repercolation being allowed, the working process should be described in detail.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 150.

The Committee of Reference in Pharmacy presents a general description of the process of repercolation to be included in the appendix of the Ph. Brit.—Brit. & Col. Drug., Lond., 1910, v. 58, p. 29.

Davis, Frank M., describes and illustrates a modified form of Soxhlet extraction apparatus for the percolation of substances difficult to extract in the usual manner.—J. Ind. & Eng. Chem., 1910, v. 2, p. 102.

Dunn, J. A., thinks the most important factor in percolation is the selection of a proper menstruum.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 152.

Bruns, W., calls attention to some of the advantages of extracting drugs with the menstruum under pressure. Also to some of the modifications that have been made in his pressure extraction apparatus.—Ber. d. pharm. Gesellsch., 1910, v. 20, pp. 506–508.

A number of comments on the relative value of maceration and percolation are presented; the majority, if not all, of the contributors agreeing that for practical purposes percolation has many advantages over maceration.—Am. J. Pharm. 1910, v. 82, pp. 187–197.

Capillèry, E., discusses some of the advantages of lixiviation, giving tabulated comparative results by different processes of lixiviation, maceration, infusion, etc.—Bull. pharm. sud-est, 1910, v. 15, pp. 17–21.

9. EXTRACTION.

Bruns, W., discusses the utility of having the menstruum under pressure, in extracting drugs.—Ber. d. pharm. Gesellsch., 1910, v. 20, pp. 506–508. See also Pharm. Zentralh. 1910, v. 51, pp. 150–154.

Kroeber, Ludwig, discusses the uses of the pressure percolator proposed by Bruns, reviews some of the recent articles that have appeared relating to it, and reports a number of experiments conducted by himself.—*Ibid.* pp. 41–47. See also articles by Herzog and Dieterich, *Ibid.* pp. 83–86.

Herzog and Fosse report a series of comparative experiments to determine the efficiency of several methods of extraction. In their hands, percolation gave a higher extract content than did maceration followed by expression.—Ber. d. pharm. Gesellsch., 1910, v. 20, pp. 330–350.

Wilbert, M. I., points out that one important feature, in connection with the Continental 70 per cent alcohol menstruum for tinctures, is that this strength of alcohol has been found to be a much more efficient antiseptic than either more dilute or more concentrated mixtures of alcohol with water. He thinks that this one property of 70 per cent alcohol alone should warrant its careful consideration, on the part of the next U. S. P. Committee of Revision, for adoption as a routine menstruum in place of the diluted alcohol now generally prescribed.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1145.

Beringer, George M., is far from being convinced that the U. S. P. has committed any error in not adopting 70 per cent alcohol as the universal menstruum for the tinctures of potent drugs. It does not appear to be likely that this is the best menstruum for the extraction of drugs of such varying physical characters and chemical constituents.—*Ibid.* p. 773.

Lyons, A. B., in commenting on the proposition for a uniform menstruum, said that the subject was thoroughly thrashed out in the Revision Committee and it was agreed that, for each tincture, that menstruum should be adopted which experience showed best suited to the drug.—*Ibid.* p. 802.

Hallberg, C. S. N., asserts that everybody knows better than to adopt a uniform menstruum of 70 per cent alcohol for potent drugs. It is ridiculous. No man of experience would entertain such a thing for a moment.—*Ibid.* p. 799.

10. STERILIZATION.

Schneider, Albert, discusses the teaching of bacteriology in colleges of pharmacy.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 679–683.

Coblentz, Virgil, thinks that the subject of sterilization by the pharmacist is a serious one and had better be relegated to the specialist.—Proc. Maine Pharm. Ass., 1910, p. 45.

Remington, Joseph P., in discussing the rôle of the pharmacist in preventive medicine, urges that, whenever old bottles or boxes come into the store to be refilled, they should be disinfected or sterilized, but far better destroyed.—J. Am. M. Ass., 1910, v. 55, p. 557.

Roehr, Clarissa M., discusses the preparation of sterile solutions.—Merck's Rep., 1910, v. 19, pp. 99–100.

See also an editorial note, Drug. Circ., 1910, v. 54, p. 475.

Brown, Linwood A., discusses the sterilization of preparations which should be dispensed in a sterile or aseptic condition.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, pp. 169–171.

The Kings County Pharmaceutical Society recommends that a chapter on sterilization be included in the next Pharmacopœia.—Drug. Circ., 1910, v. 54, p. 254. See also Am. Druggist, 1910, v. 56, p. 255.

Breves, Rudolph, thinks that directions for the sterilizing of infusions and injections should be given.—Practical Druggist, 1910, v. 28, p. 39.

Cook, E. Fullerton, discusses the application of the principles of sterilization by the retail pharmacist in routine practice.—Drug. Circ., 1910, v. 54, pp. 161–162.

Wyman, Max, describes and illustrates an apparatus for sterilizing medicaments at the prescription counter.—Pharm. Zentralh. 1910 v. 51, pp. 183–184.

Stephan, Alfred, discusses sterilization in the pharmacy, and describes and illustrates several pieces of apparatus to be used in this connection.—Apoth. Ztg., 1910, v. 25, pp. 166–167. See also J. Pharm. Elsass-Lothringen, 1910, v. 37, pp. 90–96.

Thomann's paper on sterilization is translated by Griggi and published in a 15-page supplement to Boll. chim. farm. 1910, v. 49.

Perrot reports observations on sterilized and stable drugs and their extracts.—Pharm. Post, 1910, v. 43, p. 713.

Schneider, Albert, continues his dissertation on pharmaceutical bacteriology.—Merck's Rep., 1910, v. 19, pp. 151–153.

Cook, E. Fullerton, advocates the admission of a chapter on sterilization in the N. F.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 220. See also *Ibid.* p. 159.

Diehl, C. Lewis, reports that a chapter, outlining methods for sterilization as applied to pharmaceutical practice, is to be introduced in the N. F.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 526.

The American Pharmaceutical Association approves the recommendation "that a chapter on sterilization be introduced describing the proper methods for sterilizing medicaments and apparatus, and indicating to what preparations each method is especially applicable." *Ibid.* p. 538.

Wulff, C., discusses the method of sterilization described in the Ph. Ital. III.—Apoth. Ztg., 1910, v. 25, p. 920.

The Chemist and Druggist (1910, v. 77, p. 353) reproduces the instructions of the Swiss and Italian Pharmacopœias with reference to the sterilization of solutions for hypodermic use.

See also Drug Topics, 1910, v. 25, p. 275.

Dohme and Engelhardt outline the Ph. Hung. III directions for sterilization.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1170.

Lesure discusses the influence of the composition of glass in practical pharmacy.—J. pharm. et chim. 1910, v. 1, pp. 66–73, 119–126.

He also discusses sterilization with boiling alcohol.—*Ibid.* pp. 239–245, 285–289, 432–438, 484, 490.

"F. R." describes and illustrates two sterilizing apparatuses for use in pharmacy.—Ann. pharm. Louvain, 1910, v. 15, pp. 54–57.

Stich, Conrad, discusses the sterilization of talcum and of kaolin.—Pharm. Ztg., 1910, v. 55, pp. 927–928.

He also calls attention to a volume on the technique of sterilization by Ern. Gerard.—*Ibid.* p. 938.

11. FORMS OF ADMINISTRATION.

Beringer, George M., thinks that, with regard to dosage forms of medicines, it is clearly within the province of the pharmacist to work out the formulas for them.—Am. J. Pharm. 1910, v. 82, p. 200.

The Committee of Reference in Pharmacy presents the following formula for making lamellæ: Gelatin 180 gm.; glycerin 20 gm.; distilled water 880 gm. Mix the glycerin with the water allow the gelatin to soak in the mixture till softened and then dissolve by gentle heat. It also presents a number of formulas for mixtures of this base with alkaloids.—Brit. & Col. Drug., Lond., 1910, v. 58, p. 28.

An unsigned article (Southern Pharm. J., 1909–10, v. 2, p. 256) discusses the nature, origin and objects of fluid glycerates and presents the type formula as proposed by Beringer.

Guyot, Rene, calls attention to the need for study of the alterations in collyria produced by microbic agents.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 387–392.

Haselstein, Fritz, discusses the coating of pills with varnish, silver, gelatin, sugar, keratin and salol, and illustrates a number of machines used in the making and coating of pills in a large way—Pharm. Post, 1910, v. 43, pp. 377–378; 389–390.

Moore, J. Langford, describes and illustrates a serviceable emulsion machine.—Pharm. J., 1910, v. 30 (84), p. 635.

Bjerre, Nicolai, describes and illustrates a new apparatus devised by N. L. Møller for filling collapsible tubes.—Arch. Pharm. og Chem. 1910, v. 17, pp. 2–7.

La Pierre, E. H., discusses the making of suppositories.—Apothecary, 1910, v. 22, no. 7, p. 17.

AMPOULES.

Rogers, R. R., discusses the making and filling of ampoules and presents some notes on the history of this class of preparations. He asserts that Limousin in 1886 was the first to prepare ampoules of the type now in use.—Pacific Pharmacist, San Francisco, 1909–10, v. 4, pp. 106–108.

Mayo, Caswell A., describes and illustrates the making, filling and sterilizing of ampoules.—Rev. Am. Farm. y Med., 1909–10, v. 14, pp. 9–12. See also Am. Druggist, 1910, v. 56, p. 197, and p. 138.

Wulff, C., describes and illustrates apparatus for filling ampoules.—Arch. d. pharm. Gesellsch., 1910, v. 20, pp. 118–134. See also discussion on the filling and sterilizing of ampoules.—*Ibid.* pp. 134–137. And Apoth. Ztg., 1910, v. 25, p. 174.

Stephenson, Thos., presents a note on the filling of hypodermic ampoules, and points out that an ampoule should never be filled more than two-thirds full, in order to allow for expansion during sterilization.—Year-Book of Pharmacy, 1910, pp. 447–450. See also Pharm. J. 1910, v. 31 (85), p. 140. For discussion see p. 178.

Deussen, Ernst, describes and illustrates an apparatus for the cleaning and sterilizing of ampoules.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 20, pp. 498–499. See also Pharm. Ztg. 1910, v. 55, p. 1047, and Apoth. Ztg., 1910, v. 25, pp. 931–932.

Kollo, Constantin, discusses the making and filling of ampoules.—Pharm. Zentralh. 1910, v. 51, pp. 26–30.

Grubler, M., describes and illustrates the filling of ampoules in large and in small numbers.—Pharm. Post, 1910, v. 43, pp. 357–359.

Schröder, M. J., discussing the cleaning and filling of ampoules, points out that the sterilization of solutions of adrenalin, morphine and extract of ergot presents difficulties that can only be overcome by special means.—Pharm. Weekblad, 1910, v. 47, pp. 1138–1140.

CAPSULES.

An editorial (Bull. Am. Pharm. Ass., 1910, v. 5, p. 582) discusses the nature of gelatin capsules and their uses.

Emanuel, Louis, Jr., presents a few observations on soft elastic capsules, and expresses the opinion that a home filled capsule is therapeutically superior to a foreign one six months in stock.—*Ibid.* pp. 610–613.

Egede describes and illustrates an apparatus for filling capsules with powder.—Arch. Pharm. og Chem. 1910, v. 17, p. 8.

Barnett, I. J., discusses some of the uses of soluble elastic capsules.—Am. Druggist, 1910, v. 56, p. 232.

COMPRESSED TABLETS.

The Pharmaceutical Journal (1910, v. 31 (85), p. 123) chapter in practical pharmacy, discusses the making of tablets and figures some of the apparatus used in the process.

Glaser, E., (Sonderabdr. d. Allg. Militärärztl. Ztg. 1909, 7 S) reports the study of compressed tablets, states that the solubility of tablets decreases with age, and suggests that a time limit be established for ready made preparations of this type.—Chem. Repert., Cöthen., 1910, v. 34, p. 26.

Wetterstroem, Theo. D., thinks the Pharmacopœia should include a general formula for tablet triturates. At the present time some pharmacists are using as a base sugar of milk, others talcum powder, others kaolin, and still others calcium sulphate.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 796–797.

An editorial (N. A. R. D. Notes, 1910–11, v. 11, p. 129) suggests as a diluent for tablet triturates, finely powdered sugar of milk, to which has been added about five per cent of pure powdered sugar and about two per cent of pure white dextrin.

Needham, R. H., recommends that a chapter on a tablet triturate base, with a limitation for the use of lubricants, be included in the N. F. —Proc. Texas Pharm. Ass., 1910, p. 72.

McKesson, Donald, thinks that comment on excipients for tablets which are liable to cause decomposition of their active principles should be added where expedient.—Drug Topics, 1910, v. 25, p. 19.

Dohme, A. R. L., reports observations on the stability of tablet triturates of substances that are prone to change.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1006.

An editorial (Apoth. Ztg., 1910, v. 25, pp. 388–389) calls attention to the unsatisfactory nature of many of the commercial compressed tablets.

"Th. M. in C." discusses compressed tablets and calls attention to the ease with which these articles can be made to disintegrate readily.—*Ibid.* p. 416.

An unsigned article (*Ibid.* p. 683) presents formulas for the making of a number of compressed tablets.

An editorial (N. A. R. D. Notes, 1910–11, v. 11, pp. 625–626, and 801–802) discusses the making of compressed tablets and points out that the use of starch in this class of preparations is as a disintegrator, and, for substances which are not readily soluble, at least 10 per cent of the mass weight should be starch.

Dohme and Engelhardt outline the Ph. Hung. III requirements for tablets.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1189.

Puckner and Hilpert report a second examination of tablets of bismuth, opium and phenol, which illustrates the limitations of tablet compounding.—J. Am. M. Ass., 1910, v. 55, p. 2169.

Brady, William, points out that many drugs administered in tablet form are wholly useless.—N. York M. J., 1910, v. 91, p. 209.

12. METHODS OF ADMINISTRATION.

The Editor of the Therapeutics Column (J. Am. M. Ass., 1910, v. 54, p. 1786) discusses how and when shall drugs be administered.

Hatcher, Robert A., discusses the relation between dosage and the method of administration. There is no general ratio of absorption of drugs from the stomach, rectum and subcutaneous tissues, and we are in urgent need of accurate observations of the rate of absorption of different drugs after various modes of administration.—*Ibid.* v. 55, pp. 746–749.

Brady, William, presents a paper on the administration of drugs, with regard to absorption and elimination.—N. York M. J., 1910, v. 91, pp. 209–212.

Hill, Eben C., describes and illustrates a simple method of rectal feeding or proctoclysis.—*Ibid.* p. 2233. See also McLean, Angus, *Ibid.* v. 54, p. 1134.

Maw, J. H., calls attention to the danger of introducing air through apparatus for venous injections and states that he has found it necessary to pass about a pint of liquid through the tubes in order to get rid of the extremely tenacious air bubbles.—Lancet 1910, v. 179, p. 250.

de Riddler, E., discusses the question of hypodermic injections and expresses regret that it is not adequately treated in the Ph. Belg.—J. pharm. Anvers, 1910, v. 66, pp. 371–375.

Scott, Eueidas K., describes and illustrates a new instrument for proctoclysis.—J. Am. M. Ass., 1910, v. 54, p. 1204. See also Harrison, P. W., Boston M. & S. J., 1910, v. 162, p. 641, and Hird, A. E. Wilson, Lancet, 1910, v. 179, p. 35. See also "Thermos" application, *Ibid.* pp. 1517, 1581.

Drueck, Charles J., contributes a paper on the enema, its place in the treatment of gastrointestinal diseases.—Med. Rec. N. Y., 1910, v. 78, p. 63.

Hodgson, Robert Hugh, describes and illustrates an apparatus for the inhalation of ether and other drugs.—Lancet, 1910, v. 178, p. 1421.

Hellman, Alfred M., has devised a flexible Esmarch inhaler, made of copper wire, nickel plated, instead of steel.—Med. Rec. N. Y., 1910, v. 77, p. 413.

Gwathmey, James T., describes and illustrates a vapor anæsthesia apparatus.—J. Am. M. Ass., 1910, v. 55, p. 2150.

II. INTERNATIONAL STANDARDS.

1. INTERNATIONAL CONFERENCE FOR THE UNIFICATION OF PHARMACOPŒIAL FORMULÆ FOR POTENT MEDICAMENTS (BRUSSELS CONFERENCE).

1. ADOPTION OF BRUSSELS CONFERENCE PROTOCOL.

Hunt, Reid, calls attention to the provincialism which has until recently characterized practically all of the pharmacopœias, and the strong tendency at the present time toward international standards and methods.—J. Am. M. Ass. 1910, v. 54, p. 174.

Motter, Murray Galt, in discussing the need for an international standard, points out that if the Pharmacopœia is a book prepared for the convenience of the local medical and pharmaceutical professions, that is one thing. If, on the other hand, a pharmacopœia is published as a public health measure, a book which necessarily affects the health of the people at large, we must recognize that in these days of increased and growing transportation facilities, and the growing habit of travel, there is strength in the argument that different countries should adopt a uniform standard, especially for potent remedies, because of the interchange of prescriptions between civilized countries.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 802.

Haskin, Frederic J., states that in striving after an international pharmacopœia binding upon all civilized nations alike, the difficulty of reaching a common basis of action has been so great that every effort to get an international pharmacopœial convention with power to act has fallen to the ground and so every nation has its own standard.—Pacific Drug Review, Mar. 1910, v. 22, p. 14.

Raubenheimer, Otto, reviews the history of pharmaceutical congresses leading up to the Brussels Conference.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1137.

The members of the New York Branch of the A. Ph. A. recommend that further efforts be made to establish and adopt international nomenclature and standards for drugs and preparations.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 288.

Wilbert, M. I., discusses the desirability of developing international uniformity in nomenclature and strength of widely used medicines, and calls attention to some of the differences existing in the pharmacopœias used in North and South America.—Am. J. Pharm. 1910, v. 82, pp. 305–314.

Jeancard and Satie point out that the Latin names in different pharmacopœias are not the same and that this divergence does not constitute an elegance. They think it would be desirable to omit Latin appellations altogether.—Am. Perf. 1910–11, v. 5, p. 140.

Oldberg, Oscar, thinks that whenever changes are made in pharmaceutical nomenclature we must bear in mind that ultimate international uniformity ought to be promoted. Modern chemical nomenclature in English, German and all other living languages is to a great extent already similar.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 761.

Hunt, Reid, asserts that in view of the fact that medicine is distinctly international, and that the next U. S. P. will probably draw, as it has always done, very largely from foreign sources, greater efforts should be made to attain international agreements both as regards standards and nomenclature.—J. Am. M. Ass. 1910, v. 54, p. 397. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 88.

Lyons, A. B., believes that the pharmacopœias of the world must come together on the question of nomenclature.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 766.

Breves, Rudolph, thinks that the Latin nomenclature of Pharmacopœias should be international and uniform.—Practical Druggist, 1910, v. 28, p. 38.

Bartlett, H. H., thinks that the names proposed by the Brussels Conference for the several important medicaments included in the Protocol are generally more acceptable than the corresponding names included in the U. S. P. VIII.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 86.

Seltzer, Leonard A., reports resolutions, adopted by a joint meeting of physicians and druggists at Detroit, which declare that the Pharmacopœia should endeavor to comply with well established international nomenclature and standards for drugs and preparations.—Bull. Pharm. 1910, v. 24, p. 169.

Beringer, George M., thinks that international nomenclature is one of the idealistic dreams like that of a universal language and universal peace and other Utopian ideas that from a purely ethical standpoint look very inviting, but are not practical in the present state of the nations.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 773.

An editorial (Pharm. J. 1910, v. 31 (85), p. 339) comments on the significance and success of the International Congress of Pharmacy held in Brussels.

Wilbert, M. I., thinks that the International Congress of Pharmacy held in Brussels, September 1 to 6, 1910, promises to have a potential influence on the progress of pharmacy in all of the many countries represented.—Am. J. Pharm. 1910, v. 82, p. 569.

The proceedings of the 10th International Congress held in Brussels are reported at length.—Pharm. Post, 1910, v. 43, pp. 673–674; 691–694; 714–715; 726–728. See also Pharm. Zentralh. 1910, v. 51, p. 921; Apoth. Ztg. 1910, v. 25, pp. 713–714; Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 674–675; 680–691; Brit. & Col. Drug. 1910, v. 58, pp. 214–218, and Drug. Circ. 1910, v. 54, pp. 600–601.

Schamelhout, A., discusses general principles underlying the valuation of medicaments and galenical preparations for the purpose of international standardization of methods of examination.—Pharm. Ztg. 1910, v. 55, p. 731. See also J. pharm. Anvers, 1910, v. 66, p. 675; Chem. & Drug. 1910, v. 77, p. 402; Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 3–12.

Erculisse, P., discusses the desirability of international uniformity in the nature and strength of reagents.—Pharm. Post, 1910, v. 43, pp. 678–679. See also Pharm. Ztg. 1910, v. 55, p. 731, and Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 13–20.

Möller, Hans Jacob, discusses the desirability of adopting international standards for colors, reviews the several schemes that have been proposed from time to time, and suggests the general acceptation of the "Code des Coleurs," prepared by Klincksieck and Valette, as being practical.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 358–368. See also Pharm. Post, 1910, v. 43, pp. 777–779, and Compt. rend. Congr. Internat. Pharm., 1910 (Brussels 1911), pp. 161–170.

The discussions on the proposed international unification of reagents and methods of analysis are reprinted with the recommendation that the International Congress endorse the proposition.—Compt. rend. Congr. Internat. Pharm., 1910 (Brussels, 1911), pp. 230–233.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 809) points out that the desire to introduce international uniformity in pharmacopœial requirements while fully justified will hardly be realized fully in the near future, though gradual approximation is being secured.

The proceedings of the Second International Congress for the Suppression of Adulteration in foods, drugs and chemical substances are reported.—Pharm. Post, 1910, v. 43, pp. 2–6; 13–14; 21–22.

The proposed standards for chemicals, volatile oils and crude drugs discussed at the Second International Congress for the Supression of Adulteration are reprinted.—Oesterr. Chem.-Ztg. 1910, v. 13, pp. 17–19, 30–32.

Schimmel & Co (Semi-Annual Report, April 1910, pp. 141–145) review and comment on the standards and descriptions for essential oils proposed at the Second International Congress of the White Cross.

An unsigned article (Brit. and Colon. Drug.) discusses the international standards for the purity of drugs and presents a table showing the minimum strength and the permissible contamination of a number of chemical substances.—Merck's Rep. 1910, v. 19, pp. 198–199.

The Lancet (1910, v. 179, p. 1589) reports that, at the suggestion of the Local Government Board, the Pharmacopœia Committee sent its secretary to Paris to an International Conference on methods and standards in food and drug analysis.

An unsigned article (Rev. Am. Farm. y Med. 1909–10, v. 14, pp. 129–130) calls attention to the international white cross congresses for defining the purity of drugs and chemical products that have been held.

An editorial (Am. Druggist, 1910, v. 56, pp. 266–267), in commenting on how pharmacopœias are made, calls attention to some of the widely varying requirements made by the several pharmacopœias, and some of the accompanying problems to be met by committees of revision.

Wilbert, M. I., presents the following table showing the number of titles included in the several national pharmacopœias:

Pharmacopœia.	Published.	Total titles.	General headings.	Drugs.	Chemicals.	Preparations.
British IV	1898	826	0	189	186	451
German IV	1900	626	23	193	176	234
United States VIII	1905	958	6	241	268	443
Spanish VII	1905	1,073	0	269	260	544
Dutch IV	1905	673	17	200	182	274
Japanese III	1906	706	14	204	207	281
Belgian III	1906	722	25	185	173	339
Austrian VIII	1906	698	19	232	160	287
Danish VII	1907	489	22	142	144	181
Swiss IV	1907	853	29	244	227	353
Swedish IX	1908	583	19	144	179	241
French V	1908	1,122	48	271	293	510
Italian III	1909	669	18	164	193	294
Hungarian III	1909	551	18	142	187	204

—J. Am. M. Ass. 1910, v. 55, p. 1368. See also Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 33.

An editorial (Am. Druggist, 1910, v. 56, p. 70) calls attention to a series of papers on the making of pharmacopœias.

Hunt, Reid, discusses the object of the Brussels Treaty, the extent to which foreign pharmacopœias have complied with its requirements and the extent to which foreign pharmacopœias have included substances proposed for admission to the U. S. P. He presents the following table:

Articles proposed for admission to U. S. P.	Official in Pharmacopœia.																
	Austrian.	Argentine.	Belgian.	British.	Danish.	Dutch.	French.	German.	Hungarian.	Italian.	Japanese.	Mexican.	Norwegian.	Russian.	Spanish	Swedish.	Swiss.
Adrenalin hydrochloride	....	....	×	....	....	....	×	....	....	×	....	×	....	....	....	....	....
Caffeinæ sodio-benzoas	×	....	....	....	×	×	....	....	×	×	×	....	....	....	....	....	×
Caffeinæ sodii salicylas	....	....	×	....	×	×	....	×	×	....	×	....	×	×	....	....	×
Calcium lactate	....	....	×	....	....	....	....	....	....	×	....	....	....	....	×	....	....
Cotarnin hydrochloride	....	....	....	....	....	....	....	....	....	....	....	×	....	....	....	....	....
Diacetyl morphine hydrochloride	....	....	....	....	....	....	....	×	....	×	×	×	....	×	....	....	×
Morphine ethyl hydrochloride	....	....	....	....	....	....	....	×	....	....	....	×	....	....	....	....	×
Nitrous oxide	....	....	....	....	....	....	....	....	....	....	....	×	....	....	....	....	....
Novocain	....	....	....	....	....	....	....	×	....	....	....	....	....	....	....	....	....
Oxygen	....	....	....	....	....	....	×	....	....	×	....	×	....	....	×	....	....
Phenolphthalein	....	....	....	....	....	....	....	×	....	....	....	....	....	....	....	....	....
Proteid silver compound	×	....	×	....	....	....	....	×	....	....	×	×	....	....	....	....	×
Sodium arsanilate	....	....	....	....	....	....	....	×	....	....	....	....	....	....	....	....	....
Sodium cacodylate	....	....	....	....	....	....	×	....	....	×	....	....	....	....	....	....	×
Tannin protein derivatives	×	....	×	....	....	×	....	×	×	....	....	×	....	....	....	×	....
Tetanus antitoxin	....	....	×	....	....	....	×	×	....	....	....	....	....	....	....	....	×
Theobromine	×	×	....	....	....	×	×	....	....	....	....	×	....	....	×	×	×
Theobromine sodio-salicylate	×	....	×	....	×	×	....	×	×	×	×	×	....	....	×	×	×
Trioxymethylene	....	....	×	....	....	....	×	....	....	×	....	....	....	....	....	....	....
Tuberculin	....	....	×	....	....	....	×	×	....	....	×	....	....	....	....	....	×
Vaccine virus	....	....	×	....	....	....	....	....	....	....	....	....	....	....	....	....	×

—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 770–772.

The following additional table of new remedies official in the U. S. P. and in the foreign pharmacopœias is based on an enumeration in Pharm. Ztg. 1910 (v. 55, pp. 603–604).

[The title used is the one appearing most frequently.]

	Austrian, 1906	Belgian, 1906	British, 1898	Danish, 1907	Dutch, 1905, 1910	French, 1908	German, 1910	Hungarian, 1909	Italian, 1909	Japanese, 1907	Russian, 1910	Spanish, 1905	Swedish, 1908	Swiss, 1907	U. S. P., 1905
Acetanilide	×	×	×	×	×	×	×	×	....	×	×	×	×	×	×
Acid acetylsalicylic	....	....	....	×	×	×	....	×	×	×	....	....	×	×	....
Antipyrine	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Antipyrine caffeine citrate	....	....	....	....	×	....	....	....	....	....	....	....	....	....	....
Aristol	....	×	....	....	....	×	....	....	....	....	×	×	....	....	×
Betanaphthol benzoate	....	....	....	....	....	×	....	....	×	....	....	×	....	×	....
Bismuth subgallate	×	×	....	×	×	×	×	×	×	×	×	....	×	×	×
Bismuth tribromphenolate	....	....	....	....	....	....	....	....	....	×	....	....	×	×	....
Chinosol	....	....	....	....	....	....	....	....	....	....	×	....	....	....	....
Creosote carbonate	×	×	....	....	....	....	....	....	....	×	....	....	....	×	....
Diethylmalonylurea	....	....	....	....	×	....	×	....	×	....	....	....	×	×	....
Exalgin	....	....	....	....	....	×	....	....	....	....	....	×	....	....	....
Ferratin	....	....	....	....	....	....	....	....	....	....	×	....	....	....	....
Guaiacol carbonate	×	×	....	....	×	×	×	×	×	×	×	×	×	×	×
Hexamethylentetramine	....	....	×	....	×	....	×	....	×	×	....	....	×	×	×
Iodol	....	....	....	....	....	....	....	....	×	....	×	×	....	....	×
Lactylphenetidin	....	....	....	....	....	....	×	....	....	×	....	....	....	×	....
Phenacetin	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Potassium sulphoguaiacolate	....	....	....	....	....	....	....	×	....	....	....	....	....	....	....
Protargol	×	×	....	....	....	....	....	×	×	×	....	....	....	×	....
Pyramidon	....	....	....	....	×	....	....	....	×	×	....	....	....	....	....
Quinine ethyl carbonate	....	....	....	....	....	....	....	....	×	×	....	×	×	....	....
Salipyrine	×	....	....	×	×	×	×	×	....	×	×	....	....	×	....
Salol	×	×	×	×	×	....	×	×	×	×	×	×	×	×	×
Salophen	....	×	....	....	....	×	....	....	....	....	....	....	×	....	....
Sulphonal	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Tannalbin	×	×	....	....	×	....	×	....	....	×	....	....	×	....	....
Tannoform	....	....	....	....	....	....	....	....	....	....	....	....	×	....	....
Trional	×	×	....	....	....	×	×	×	×	×	....	×	×	×	×
Urethane	....	....	....	....	....	....	....	....	....	....	....	×	....	....	....

Wilbert, M. I., discusses the desirability of developing international uniformity in nomenclature and strength of widely used medicines, and presents a table showing the comparative strength of preparations of potent medicaments included in the Brussels Conference Protocol and in the several pharmacopœias used in North and South America.—Am. J. Pharm. 1910, v. 82, pp. 305–314.

The members of the Kings County Pharmaceutical Society recommend that the U. S. P. adhere strictly to the resolutions of the Brussels International Conference, especially as to nomenclature, strength of preparations, and normal medicine dropper.—Am. Druggist, 1910, v. 56, p. 255.

Wilbert, M. I., points out that the Brussels Protocol forms the basis of an "Agreement between the United States and other Powers respecting the Unification of the Pharmacopœial Formulas for Potent Drugs," signed at Brussels, November 29, 1906, and this agreement is available in the form of a publication issued by the U. S. Department of State as "Treaty Series No. 510."—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1140.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 195) states that the congress, held in Brussels in 1903 for an international agreement on the unification of strength for potent medicines, has accomplished more than all of the work for an international pharmacopœia.

An editorial (Am. Druggist, 1910, v. 56, p. 71) asserts that in every case where the pharmacopœia has been revised since the Brussels Conference of 1902, the recommendations of that conference are, in the main, agreed to.

Kraemer, Henry, expresses the belief that pharmacists are beginning to appreciate the need of international standards. They are glad to be informed as to what other countries are doing.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 800.

Wilbert, M. I., thinks that in view of the widespread and general acceptation of the provisions of the "International Agreement respecting the Unification of the Pharmacopœial Formulas for Potent Drugs" by the powers signatory to the treaty of 1906, the Pharmacopœia of the United States of America should surely be made to comply with the letter as well as the spirit of that agreement.—*Ibid.* p. 1145.

Cook, E. Fullerton, commenting on the official tinctures of the U. S. P., points out that twenty-eight were changed in strength to correspond to the international standard and practically all of the pharmacopœias of the world, which have been revised since 1902, conform to those standards.—*Ibid.* p. 1248.

Lyons, A. B., in commenting on the variance of the pharmacopœias of the world from the requirement of the Brussels Protocol, points out that the Mexican and Spanish pharmacopœias most nearly approximate it, while the German and the United States Pharmacopœias, especially the latter, which represented the greatest independence of thought along these lines, showed the widest variance from the recommendations of the Protocol.—*Ibid.* p. 798.

Anselmino, O., discusses the object of the provisions of the Brussels Protocol for the unification of the pharmacopœial formulæ for potent medicaments, points out the reasons why the German Pharmacopœia does not comply with these provisions in some unimportant particulars, and reproduces the provisions and exceptions as embodied in the International Treaty signed in Brussels in 1906.—Ber. pharm. Gesellsch. 1910, v. 20, p. 549.

Wilbert, M. I., reviews the relative compliance of various pharmacopœias with the Protocol of the Brussels Conference, presents a table showing how preparations official in various national pharmacopœias in 1902 compared with the proposed international standards, and a table showing the comparative degree of compliance with international standards, by the several pharmacopœias, in 1910. He also presents a table showing the total number of compliances and noncompliances with the requirements of the International Protocol.

TABLE SHOWING TOTAL NUMBER OF COMPLIANCES AND NONCOMPLIANCES WITH THE REQUIREMENTS OF THE INTERNATIONAL PROTOCOL.

Pharmacopœias.	1902.			1910.		
	Complied.	Did not comply.	Total.	Complied.	Did not comply.	Total.
Ph. Brit	3	17	20	....	....	....
Ph. Germ	17	1	18	17	1	18
Ph. Mex	2	16	18	15	3	18
U. S. P	4	16	20	15	5	20
Ph. Ndl	17	4	21	21	1	22
Ph. Hisp	1	14	15	20	0	20
Ph. Japon	11	3	14	17	1	18
Ph. Belg	2	17	19	22	0	22
Ph. Austr	13	5	18	18	0	18
Ph. Dan	9	3	12	14	0	14
Ph. Helv	17	3	20	20	0	20
Ph. Svec	12	4	16	15	0	15
Ph. Fr	3	17	20	17	2	19
Ph. Ital	10	5	15	19	0	19
Ph. Hung	8	6	14	16	2	18
Total	129	131	260	246	15	261

—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1139–1146.

2. *Table showing preparations official in various national Pharmacopœias in 1902 compared with proposed international standards.*

	Ph. Brit. IV, 1898.	Ph. Germ. IV, 1900, and Suppl., 1895.	Ph. Mex. III, 1894.	U. S. P. VII, 1893.	Ph. Hisp. VI, 1884.	Ph. Ndl. III, 1889.	Ph. Japon. II, 1891.	Ph. Belg. II, 1885.	Ph. Austr. VII, 1889.	Ph. Dan. VI, 1893.	Ph. Helv. III, 1893.	Ph. Svec. VIII, 1879.	Ph. Fr. IV, 1884.	Ph. Ital. II, 1901.	Ph. Hung. II, 1888.	Prot. Internat., 1902.
Tincture of aconite	5 w/v	10	....	35 w/v	....	10	....	....	10	....	10	....	20	10	20	10
Tincture of belladonna	....	....	20	15 w/v	20	10	....	20	10	....	10	....	20	....	....	10
Tincture of cantharides	1.25 w/v	10	....	5 w/v	....	10	10	20	10	10	10	10	10	10	20	10
Tincture of colchicum seed	20 w/v	10	20	15 w/v	....	10	10	20	....	....	10	10	20	....	20	10
Tincture of digitalis	12.5 w/v	10	....	15 w/v	20	10	10	20	20	10	10	10	20	10	20	10
Tincture of hyoscyamus	10 w/v	10	20	15 w/v	20	10	....	20	....	....	....	....	20	....	....	10
Tincture of iodine	2.5 w/v	10	8.4	7 w/v	6	8	8.4	8	6	5	8	5	7	8	10	10
Tincture of ipecac	....	10	20	....	20	10	....	20	10	....	10	10	20	....	20	10
Tincture of lobelia	20 w/v	10	20	20 w/v	....	10	10	20	10	10	10	10	20	10	....	10
Tincture of nux vomica	16.6 w/v	10	20	12 w/v	20	10	10	20	10	10	10	10	20	10	....	10
Tincture of opium	7.5 w/v	10	12.5	13 w/v	....	10	10	8.4	10	10	10	10	15	10	....	10
Tincture of opium, Sydenham's	....	10	12.5	....	8	....	....	13.5	10	....	10	....	....	....	10	10
Tincture of opium, camphorated	0.46 w/v	0.5	0.6	0.5 w/v	....	0.5	0.5	0.5	....	0.5	0.5	0.5	0.45	....	....	0.5
Tincture of strophanthus	2.5 w/v	10	20	5 w/v	....	5	....	....	5	....	10	10	20	5	....	10
Bitter almond water	....	0.1	....	0	0.83	0.1	0.1	0.05	0.1	0.1	0.1	1.3	0.5	0.1	0.1	0.1
Sirup of ipecac	....	1	1 ex.	7 w/v	2	5	....	....	1	....	1	....	3	1	1	1
Sirup of iron iodide	7.3 w/v	5	1	10	0.67	5	5	0.5	5.5	10	1	10	0.5	0.61	12.2	5
Hydrocyanic acid, dilute	2	2	1	2	10	2	1	2.5	....	....	....	....	1	....	....	2
Ointment of mercury	48.5	33	50	48.5	50	25	33	50	30	20	34	20	50	50	30	30
Solution of potassium arsenite	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wine of antimony	0.457	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.4	....	0.4	0.4	....	0.4	0.4	0.4
Powder of ipecac and opium	10	10	10	13	8.8	10	10	16	14.3	10	10	10	10	14.3	10	10

2. *Table showing comparative degree of compliance with international standards by the several Pharmacopœias in 1910.*

	Ph. Brit. IV, 1898.	Ph. Germ. IV, 1900.	Ph. Mex. IV, 1904.	U. S. P. VIII, 1905.	Ph. Hisp. VII, 1905.	Ph. Ndl. IV, 1905.	Ph. Japon. III, 1905.	Ph. Belg. III, 1906.	Ph. Austr. VIII, 1906.	Ph. Dan. VII, 1907.	Ph. Helv. IV, 1907.	Ph. Svec. IX, 1908.	Ph. Fr. V, 1908.	Ph. Ital. III, 1909.	Ph. Hung. III, 1909.	Prot. Internat., 1902.
Tincture of aconite	5 w/v	10	10	10 w/v	10	10	10	10	....	....	10	....	10	10	....	10
Tincture of belladonna	....	....	10	10 w/v	10	10	....	10	10	....	10	....	10	10	10	10
Tincture of cantharides	1.25 w/v	10	....	10 w/v	10	10	10	10	10	....	10	10	10	10	10	10
Tincture of colchicum seed	20 w/v	10	10	10 w/v	10	10	10	10	10	10	10	10	10	10	10	10
Tincture of digitalis	12.5 w/v	10	10	10 w/v	10	10	10	10	10	10	10	10	10	10	6	10
Tincture of hyoscyamus	10 w/v	....	10	10 w/v	10	10	....	10	10	....	....	....	10	....	....	10
Tincture of iodine	2.5 w/v	10	....	7+w/v	....	10	8.5	10	10	10	10	....	10	10	10	10
Tincture of ipecac	....	....	10	....	10	10	10	10	10	....	10	10	10	10	10	10
Tincture of lobelia	20 w/v	10	....	10 w/v	10	10	10	10	....	10	10	10	10	10	10	10
Tincture of nux vomica	16.6 w/v	10	10	10 w/v	10	10	10	10	10	10	10	....	10	10	6	10
Tincture of opium	7.5 w/v	10	10	12 w/v	10	10	10	10	10	10	10	10	10	10	10	10
Tincture of opium, Sydenham's	....	10	10	....	10	10	....	10	10	10	10	10	....	10	10	10
Tincture of opium, camphorated	0.46 w/v	0.5	0.5	0.48 w/v	....	0.5	0.5	0.5	....	0.5	0.5	0.5	0.5	....	....	0.5
Tincture of strophanthus	2.5 w/v	10	....	10 w/v	10	10	10	10	10	10	10	10	10	10	10	10
Bitter almond water	....	0.1	0.1	0.002 w/v	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Sirup of ipecac	....	1	....	7 w/v	1	1	1	1	1	....	1	....	1 Ext.	1	1	1
Sirup of iron iodide	7.3 w/v	5	1	5	5	5	5	5	5	5	5	5	....	....	5	5
Hydrocyanic acid, dilute	2	....	1	2	2	2	....	2	....	....	....	....	2	2	....	2
Ointment of mercury	48.5	33	30	50	30	30	30	30	30	30	30	30	50	30	30	30
Solution of potassium arsenite	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wine of antimony	0.457	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	....	0.4	0.4	....	0.4	0.4	0.4
Powder of ipecac and opium	10	10	10	12	10	10	10	10	10	10	10	10	10	10	10	10

Kraemer, Henry, in a review of the Ph. Ndl., states that one of the notable features of the Netherlands Pharmacopœia and one which makes it a model for an international pharmacopœia, which it is in a certain sense, is that due to the adherence of the commission to the standards adopted by the Brussels Conference for the Unification of the Formulæ for Potent Medicaments. While the agreement for adopting these standards was not signed until November 29, 1906, that is, five months after the Pharmacopœia became official, the standards were practically adopted as proposed by the Brussels Conference in 1902, and the initials "F. I." (Formula Internationalis) are given after the title of each preparation of the potent drugs.—Am. J. Pharm. 1910, v. 82, p. 518.

"St. G.," in a review of the new Russian Pharmacopœia, points out that the Protocol of the Brussels Conference has been closely adhered to and that this was the direct incentive for the publication of the present edition following so closely after the edition published in 1902.—Pharm. Ztg. 1910, v. 55, p. 893.

Wilbert, M. I., notes that it is gratifying to be able to point out that at least a year before the provisions of the Brussels Protocol were embodied in the pharmacopœias of any one of the signatory governments they were included, almost entire, in the Pharmacopœia of Mexico.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1140.

Hunt, Reid, points out that the degree of non-compliance of the U. S. P. with international standards as compared with the compliance of the pharmacopœias with which it comes most into competition, (viz, the French and Mexican) is especially striking.—*Ibid.* p. 771.

A symposium on the pharmacopœias of the world, contributed to by a number of pharmacists, is presented.—*Ibid.* pp. 1134–1236.

See also this Bulletin under the several pharmacopœial headings

Diagram showing the comparative degree of compliance with the Protocol of the Brussels Conference evidenced by the pharmacopœias published since the promulgation of the Brussels Protocol in 1902.

[Based on data as given in Table 4, Hyg. Lab. Bull. 79, U. S. P. H. & M. H. S., pp. 158–161.]

U. S. P. VIII,	1905	52
Ph. Japon. III,	1906	68
Ph. Svec. IX,	1908	70
Ph. Dan. VII,	1907	71
Ph. Russ. VI,	1910	77
Ph. Serb. II,	1908	80
Ph. Hung. III,	1909	80
Ph. Austr. VIII,	1906	81
Ph. Germ. V,	1910	85
Ph. Fr. V,	1908	86
Ph. Ital. III,	1909	89
Ph. Hisp. VII,	1905	93
Ph. Helv. IV,	1907	94
Ph. Belg. III,	1906	95
Ph. Ndl. IV,	1905	96
Brussels Protocol	1902	100

Diagram showing the comparative scope and content of the several official recognized standards for medicines.

[Based on data included in Table published in J. Am. M. Ass. 1910, v. 55, p. 1368. See also Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, p. 33.]

U. S. P. and N. F.	1905	1459
French Pharm.	1908	1122
Spanish Pharm.	1905	1075
Swiss Pharm.	1907	853
British Pharm.	1898	826
Belgian Pharm.	1906	722
Japanese Pharm.	1906	706
Austrian Pharm.	1906	698
Dutch Pharm.	1905	673
German Pharm.	1910	671
Italian Pharm.	1909	669
Russian Pharm.	1910	617
Swedish Pharm.	1908	583
Hungarian Pharm.	1909	551
Danish Pharm.	1907	489
Servian Pharm.	1908	474

Wilbert, M. I., in a review of the pharmacopœias of Spanish America, calls attention to the several pharmacopœias that are recognized or used and points out some of the characteristic features of the Pharmacopœias of Chile, Argentine, Venezuela and Mexico.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1218–1223. See also Western Druggist, 1910, v. 32, pp. 285–287, and Rev. Am. Farm. y Med. 1909–10, v. 14, pp. 388–390.

An unsigned article (Am. Druggist, 1910, v. 56, p. 80) points out that for the kingdom of Croatia-Slavonia and Dalmatia a special

Pharmacopœia is in force, issued by the national Government of that part of the Austro-Hungarian Monarchy.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 603) enumerates the new remedies included in the Croatian Pharmacopœia, 1901.

A book notice announces the receipt of the Pharmacopoea Graeca compiled by Dambergis, Athens.—Ber. pharm. Gesellsch. 1910, v. 20, p. 372.

The second edition of the Greek Pharmacopœia, compiled by A. K. Dambergis, published in 1910, was reviewed or referred to in several pharmaceutical journals during the year. The book differs radically from other pharmacopœias and is essentially a combined treatise on the practice of pharmacy, a formulary and reference book. Of the total 678 pages, 109 are devoted to practical pharmacy while 348 pages are devoted to the enumeration of 3416 formulas for galenical preparations. Practically all of the formulas referred to in the Brussels Protocol are included, strictly in accord with the international requirements. The remaining portion of the book is devoted to tables, miscellaneous information and a comprehensive index or series of indices covering 100 double column pages. The Protocol of the Brussels Conference for the Unification of Formulæ for Potent Medicaments is reprinted entire.

3. DROPS AND DROPPERS.

The members of the Kings County Pharmaceutical Society recommend that a standard dropper be adopted in the next U. S. P.—Drug. Circ. 1910, v. 54, p. 254.

An editorial (Am. Druggist, 1910, v. 57, p. 158), in commenting on the proposed introduction of a standard medicine dropper into the U. S. P., points out that the Austrian, Belgian, Spanish, and Dutch Pharmacopœias contain similar paragraphs.

Dohme and Engelhardt state that in the Ph. Hung. III a special dropping bottle is prescribed, such as was adopted in 1902 by the Brussels Conference. Twenty drops of distilled water should correspond to 1 gm. at 15°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1170.

Lyons, A. B., thinks that, if a dropper was adopted for use in measuring doses, it would be necessary to determine for each fluid preparation in the Pharmacopœia, the number of standard drops to the fluidrachm, and the physician could not be expected to carry all these data in his memory, as he would be compelled to do in writing extemporaneous prescriptions.—*Ibid.* p. 802.

Ahlberg, Karl, reports a comprehensive study of the weight of drops from the international drop counter and other dropping devices, and presents a table showing the several widely used liquid preparations arranged in classes according to the number of drops required to weigh one gramme.—Svensk farm. Tidskr. 1910, v. 14, pp. 113–117; 137–140; 157–161.

Seaman, William H., discusses the practicability of introducing a standard medicinal dropper into the Pharmacopœia, and presents a diagram and description of a piece of apparatus designed for measuring the dropping surface of medicine droppers.—Am. Druggist, 1910, v. 57, pp. 161–162. See also Meyer Bros. Drug. 1910, v. 31, p. 102.

Kling, K., describes and illustrates a new burette dropping device.—Chem. Ztg. 1910, v. 34, p. 100.

A new dropper device, devised by Emanuel for use in connection with eye drops, is illustrated and described.—Pharm. Zentralh. 1910, v. 51, p. 388.

Several dropping devices are described and illustrated.—Pharm. Ztg. 1910, v. 55, p. 127.

Resch, Fr., describes and illustrates a dropping bottle with a practical locking device.—Pharm. Post, 1910, v. 43, p. 780.

Wulff and Hillen describe and illustrate a normal dropper ampoule designed for the convenient and accurate dropping of liquids.—Apoth. Ztg. 1910, v. 25, pp. 1014–1015.

Driver (Münch. Med. Wchnschr. 1910, 1746) describes and illustrates a new eye dropper.—Pharm. Zentralh. 1910, v. 51, p. 977.

Katz, A. (D. R. P. 219,612 vom 9, February 1909) describes a dropping-bottle having a flat rim to neck and stopper.—Chem. Repert., Cöthen, 1910, v. 34, p. 233.

An unsigned article (Apoth. Ztg. 1910, v. 25, p. 314) describes and illustrates a normal drop pipette.

Hunt, Reid, quotes the Mexican Pharmacopœia as stating: "In pharmaceutical practice measures of capacity should not be used, but all medicaments, in general should be weighed. When it is necessary to measure by drops any small quantity of liquid, use should be made of the normal drop counter prescribed by the Brussels Conference."—Proc. Am. Pharm. Ass. 1910, v. 58, p. 771.

Beringer, George M., thinks that the paragraph of the Brussels Conference Protocol, devised for the adoption of the international drop counter, is far from being binding or even a positive declaration. He thinks that if the normal drop counter could be based on the minim, which is still the dosage drop that a majority of the physicians have in mind, it might meet with their favor.—*Ibid.* p. 774.

An editorial note (Meyer Bros. Drug. 1910, v. 31, p. 101) states that a standard medicine dropper is a consideration of more importance to the patient than the medical profession and the pharmacist seem to realize

Coblentz, Virgil E., asserts that a standard dropper has become an absolute necessity and needs no further commendation.—Proc. Maine Pharm. Ass. 1910, p. 45.

2. FOREIGN PHARMACOPŒIAS.

1. GERMAN.

Prescher, J., in discussing the nomenclature of the Ph. Germ. V for halogen salts, suggests the use of the "id" ending rather than the "atum" ending, as the latter may be mistaken for the "ate" salts.—Pharm. Zentralh. 1910, v. 51, p. 288.

Goessman, G., presents a critical study of the nomenclature of the Ph. Germ. and suggests a number of changes and corrections.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 266–277.

An unsigned article (Pharm. Ztg. 1910, v. 55, pp. 1013–1014, 1024–1025) reviews and comments on the innovations introduced in the Ph. Germ. V, the new remedies included, changes in Latin titles, changes in German titles, additional synonyms, changed and new maximum doses and the changes in the several tables and an enumeration of the new apparatus that is required.

A German Correspondent (Chem. & Drug. 1910, v. 77, p. 746) calls attention to the fact that pharmacists and manufacturers will practically be allowed but two weeks to adapt themselves to the innovations introduced in the Ph. Germ. V.

An unsigned article (Pharm. Post, 1910, v. 43, pp. 994–996) reviews the Ph. Germ. V. See also Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, pp. 548–549.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5, [1910] 1911), in a pamphlet of 60 pages present a critical review of the vegetable drugs drugs included in the Ph. Germ. V.

Hartwich, C., comments on the crude drugs of the Ph. Germ. V.—Apoth. Ztg. 1910, v. 25, pp. 1020–1022; 1034–1036; 1045–1046; 1052–1053.

An unsigned article (Pharm. J. 1910, v. 31 (85), p. 791) comments on the Ph. Germ. V, which is said to be an advance on its predecessor and fully commensurate with the advance of pharmacy and chemistry in the last 10 years. See also *Ibid.* v. 30 (84), pp. 396, 495.

An editorial (Am. Druggist, 1910, v. 57, pp. 365–366) discusses the Ph. Germ. V and states that the scope of the new German work is much wider and coincides much more nearly with the Pharmacopœia of the United States than any previous edition.

A news note (Chem. & Drug. 1910, v. 77, p. 137) states that the Prussian Budget for the current year provides for instructing the inspectors of pharmacies in the new analytical methods of the fifth edition of the German Pharmacopœia. See also Am. J. Pharm. 1910, v. 82, p. 445.

Anselmino, O., presents a comprehensive review of the new Ph. Germ. V. He calls attention to the fundamental changes that are embodied in this book, discusses the relation of the pharmacopœia to other legal provisions, and reproduces the International Treaty signed in Brussels in 1906 ratifying the provisions of the Protocol of the Brussels Conference for the unification of pharmacopœial formulæ for potent medicaments.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 536–566.

"Wtz." comments on the articles proposed for admission to the Ph. Germ. and suggests the inclusion of a number of additional articles.—Pharm. Ztg. 1910, v. 55, p. 243.

Riedel's Berichte (1910, pp. xxv–xxix) presents a number of suggestions based on practical experience for inclusion in the Ph. Germ. V.

The proposed changes in the Ph. Germ. are presented and commented upon.—Pharm. Ztg. 1910, v. 55, pp. 177–178, 185–186, 197–198.

See also Pharm. Zentralh. 1910, v. 51, pp. 172, 189–192, 206–212, 234–235; Apoth. Ztg. 1910, v. 25, pp. 148–150, 156–157, 164–165; J. Pharm. Elsass-Lothringen, 1910, v. 37, pp. 52–59, 75–87; Brit. & Col. Drug. 1910, v. 57, p. 185, and Am. Druggist, 1910, v. 56, pp. 165–166.

An unsigned article (Rev. Am. Farm. y Med. 1909–10, v. 14, pp. 268–269) calls attention to some of the proposed changes in the German Pharmacopœia.

Turner, J. L., in discussing the need for publicity, points out that the makers of the German Pharmacopœia have given considerable publicity to the progress of the revision of that book.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 974.

Riebeling, C., comments on the proposed additions to the Ph. Germ. and calls attention to several widely used new remedies not included in the list.—Apoth. Ztg. 1910, v. 25, pp. 209–210.

A list of the articles which it is necessary to have on hand in the pharmacy in Germany is reprinted.—*Ibid.* p. 1025.

An editorial (*Ibid.* pp. 993–996) presents a review of the Ph. Germ. V, calls attention to some of the changes, and reprints the table of maximum doses and the list of poisons.

Schnabel comments on the Ph. Germ. V directions for making preparations of soap and presents a number of modifications for spiritus saponatus, spiritus saponato-camphoratus, spiritus saponatus kalinus, linimentum terebinthinatum, linimentum saponato-ammoniatum, emplastrum saponatum rubrum.—Apoth. Ztg. 1910, v. 25, p. 210.

Eschbaum, Friedrich, comments on the proposed clinical tests and reagents to be included in the Ph. Germ. V and suggests a number of additions to the list already published.—Ber. Pharm. Gesellsch. 1910, v. 20, pp. 257–264.

The list of reagents and volumetric solutions to be embodied in the Ph. Germ. V for use by physicians in the examination of urine, fæces and blood is reprinted.—Apoth. Ztg. 1910, v. 25, pp. 188–189.

An unsigned article (Am. Druggist, 1910, v. 56, pp. 167–168) reviews the history of the Ph. Germ., and discusses the method of revising it.

Goetting, E. C., reviews the Ph. Germ. IV, describes the method of revising the German Pharmacopœia, discusses the size of the book and calls attention to the several classes of preparations included in it.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1157–1160.

The Chemist and Druggist (1910, v. 77, p. 898) gives an account of the elaboration of the Ph. Germ. V, and states that the Commission is continuously supplied with cuttings from the professional press of the whole world of articles bearing on its field of activity, and all expressions of opinion regarding the pharmacopœia are collected. in 1906, when work on the present edition was begun, a public request was issued to all physicians, pharmacists, and veterinary surgeons to express their wishes regarding the new edition, and in the following year the owners of 125 of the more important town and country businesses were asked for information concerning any older non-official preparations that might still be prescribed by physicians, and which official preparations were no longer in request in prescription work. It is interesting to note that the twelve foreign Pharmacopœias which had appeared during the past 10 years were also critically examined, and, needless to add, any new demands made by the army or navy were also carefully considered, as also, for the first time, the conditions prevailing in the German colonies.

2. RUSSIAN.

"St. G." presents a review of the new Russian Pharmacopœia, calls attention to the more important changes, discusses the additions, assays and alkaloidal requirements for alkaloid containing drugs, and points out that the nomenclature with few notable exceptions is practically identical with that of Germany, Austria and Switzerland.—Pharm. Ztg. 1910, v. 55, p. 893.

An editorial (Am. Druggist, 1910, v. 57, p. 295) discusses the new Russian Pharmacopœia, and points out that the principal changes which have been made in the sixth edition refer almost exclusively to the preparations which form the subject of the Brussels Conference for the Unification of the Formulas of Potent Drugs. To specially mark the articles in question the titles are printed in italics, while the terms of the Brussels agreement are incorporated in the work.

The Pharmaceutical Journal (1910, v. 31 (85), p. 748) calls attention to the Ph. Russ. VI, and states that the principal changes refer almost wholly to the preparations which form the subject of the Brussels Conference for the Unification of the Formulæ of Potent Drugs. No new synthetic preparations have been included.

An unsigned note (Chem. & Drug. 1910, v. 77, p. 792) gives the official strengths demanded in official preparations of potent galenicals in the Ph. Russ. VI as well as the alkaloidal equivalent of each cc. of normal solution.

See also Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, pp. 549–550, and Merck's Rep. 1910, v. 19, p. 356.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 604) enumerates the new remedies included in the Ph. Russ. VI, 1910.

An unsigned note (Chem. & Drug. 1910, v. 77, p. 687) calls attention to the new Russian Pharmacopœia and notes that its chief object is to introduce into practice as soon as possible the proposals agreed upon at the Brussels Conference. The Pharmacopœia was prepared by a Commission appointed by the Medical Council of the Empire, consisting of a Secretary of the Medical Council who acted as president, two professors of the Military Academy of Medicine, one *privat-docent* of the latter institution, who held degrees of doctor of medicine and magister of pharmacy, besides two pharmacists, appointed as delegates to the Medical Council by the St. Petersburg Pharmaceutical Society.

An unsigned article (Am. Druggist, 1910, v. 56, pp. 196–197), in discussing the Russian Pharmacopœia, points out that the method of pharmacopœial revision adopted by Russia most closely approaches the generally accepted notion of purely bureaucratic work. The article discusses some of the features of the Ph. Russ. V.

3. HUNGARIAN.

Kremel, A., reviews the Ph. Hung. III and calls attention to many of the characteristic features of that book; he also calls attention to the differences in strength of some of the preparations from the standards included in the Ph. Austr. VIII.—Pharm. Post, 1910, v. 43, pp. 101–102; 109–110; 121–122. See also Mitlacher, W., *Ibid.* pp. 89–90.

An unsigned article (Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, pp. 15, 47, 75, 98, 142, 171, 191), in a review of the Ph. Hung. III, calls attention to some of the properties and the composition of galenical preparations.

An editorial (Chem. & Drug. 1910, v. 76, p. 18) states that the monographs of the Ph. Hung. III do not show any important innovation; it would appear as if the standards adopted by the last edition [IV] of the German Pharmacopœia are being generally accepted as a model in Central Europe.

Gehe & Co. (Handels-Bericht, 1910, p. 43) review the Ph. Hung. III and point out that the previous edition had been published 20 years before. They also comment on the peculiar Latin of the translation and state that the book gives one the impression as if a strained effort had been made to express every idea in different language from that used in the Ph. Austr. VII.

The Budapest Correspondent (Lancet, 1910, v. 178, p. 961) briefly reviews some of the salient features of the new Pharmacopœia Hungarica.

An editorial (Rev. Am. Farm. y Med. 1909–10, v. 14, p. 152) reviews the Ph. Hung. III and calls attention to some of the characteristic features of that book.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 604) enumerates the new remedies included in the Ph. Hung. III, 1909.

Dohme and Engelhardt present a table giving a list of chemicals which do not appear in the U. S. P., compare the requirements for a number of articles and discuss the galenical preparations of the Hungarian Pharmacopœia.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1168–1169.

A number of formulas for complex pharmaceutical preparations included in the Ph. Hung. III are reprinted.—Rev. Am. Farm. y Med. 1909–10, v. 14, p. 271.

Wilbert, M. I., calls attention to a recent review of the Ph. Hung. III. The book is printed in Magyar and in Latin, the two being bound together in a single volume. The work includes 526 official preparations and 106 reagents.—Am. J. Pharm. 1910, v. 82, p. 126.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 124–127) present a critical review of the requirements made in connection with volatile oils in the Ph. Hung. III. They point out that very little advantage indeed has been taken of the scientific progress of the past 22 years in the domain of essential oils, and that, as in the previous editions of this Pharmacopœia, the principal points considered are color, odor, specific gravity and solubility, although in many cases more thorough tests would have been desirable. Moreover, in the present edition certain obsolete tests (for instance, the iodine test) are perpetuated which are without any value in judging essential oils, and which for this reason have been left out of account in the criticism presented.

An unsigned article (Am. Druggist, 1910, v. 56, pp. 79–80) calls attention to the method of revising the Hungarian Pharmacopœia and points out that this book has a distinct legislative character. A general review of the contents of the book is also included.

An editorial (Chem. & Drug. 1910, v. 76, p. 18) comments on the significance of the one or two crosses prefixed to the titles of certain drugs of the Ph. Hung. III and the dispensing of prescriptions containing these articles. See also Lancet 1910, v. 178, p. 961.

The Budapest Correspondent (Lancet, 1910, v. 178, p. 961) states that, in order to protect Hungarian pharmaceutical chemists from German and Austrian competition, the new Pharmacopœia names certain proprietary preparations, which it is desired to include, according to their chemical composition, without reference to their commercial designations.

4. ITALIAN.

Wilbert, M. I., presents a review of the Ph. Ital. III, and concludes that this book is a curious jumble of the old and the new. It represents a survival of antiquated and obsolete drugs and preparations, with modern ideals for international standards and an unusually great number of the newer remedies. It recognizes the value of sterilization and is the only national pharmacopœia to recognize and describe proprietary mixtures. Taken altogether, however, the book is a creditable one indeed, and reflects erudition and ability both on the part of the medical practitioners and the pharmacists for whose use it is designed.—Am. J. Pharm. 1910, v. 82, pp. 120–122.

An editorial (Chem. & Drug. 1910, Feb. 26, p. 327), commenting on the new Italian Pharmacopœia, shows that in certain directions tests are adapted to the requirements of the average pharmacist rather than to please the analytical specialist.—*Ibid.* p. 260.

"S." reviews the new Italian Pharmacopœia and calls attention to some of the many changes that have been made in connection with this edition.—Pharm. Ztg. 1910, v. 55, p. 155.

Wulff, C., presents a comprehensive review of the Ph. Ital. III, calls attention to many of the characteristic features of this book, and discusses the several monographs included in it.—Apoth. Ztg. 1910, v. 25, pp. 883–885; 894–895; 907–910; 918–920.

Gehe & Co. (Handels-Bericht, 1910, p. 44) review the new Italian Pharmacopœia, and call attention to the number of articles admitted and deleted. In the matter of nomenclature the scientific names are usually included, though with some of the newer remedies, where the chemical name was found to be inordinately long, the former trade name has been adopted.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 603) enumerates the new remedies included in the Ph. Ital. III, 1909.

An abstract (Pharm. Ztg.) calls attention to some of the characteristic features of the Ph. Ital. III.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, pp. 215–216.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 127–132) present a critical review of the requirements for volatile oils made in the new Italian Pharmacopœia. They point out that here and there pains have been taken to introduce more scientific tests, in case of certain oils, but many of the statements are superfluous because they signify nothing that is characteristic of the particular oil. They think it would have been very appropriate if the criticisms which have been passed on the predecessor of this Pharmacopœia had been taken to heart in a greater measure in the compilation of the present Pharmacopœia.

An editorial (Chem. & Drug. 1910, v. 76, p. 327) notes that the Ph. Ital. III omits optical tests for the essential oils, on the ground that, in addition to the considerable variation in the optical rotation in different qualities of the same genuine oil, they would entail the purchase of costly apparatus, which it is not deemed advisable to impose upon the pharmacists. For similar reasons microscopic details relating to the structure of plant drugs have been omitted.

An unsigned article (Am. Druggist, 1910, v. 56, pp. 195–196) points out that the task of elaborating the Italian Pharmacopœia falls within the province of the Board of Health, which forms a department in the Ministry of the Interior. The method of revising the Pharmacopœia is discussed and some of the characteristic features of the present third edition are enumerated.

Griggi, Gioachino, comments on and criticizes the Ph. Ital. III.—Boll. chim. farm. 1910, v. 49, pp. 11–15.

See also Nigrisoli, Vittorio.—*Ibid.* pp. 52–54; Severini, S.—pp. 139–141.

Luzzatti, Secretary of State for Internal Affairs, publishes the Tariffa dei Medicamenti comprised in the Ph. Ital. III, which appears as a supplement to Boll. chim. farm. 1910, v. 49.

See comments and criticisms of Griggi, *Ibid.* pp. 891–895.

An editorial (Pharm. J. 1910, v. 30 (84), p. 422) referring to the Ph. Ital. III says this new edition cannot be said to be characterized by any radical changes; it is rather a matter of bringing up to date according to Italian idea, which, though, of first importance to the Italian physician and pharmacist, may not appear to the British pharmacist to have been a process which singles out the Italian as an exceptionally great pharmacist.

Wilbert, M. I., points out that the Ph. Ital. III is the first of the Continental pharmacopœias to be re-revised since the meeting of the International Congress at Brussels and that in the present edition the several provisions of the Brussels Protocol have been quite fully embodied in the Pharmacopœia itself and each one of the included articles is specially designated (F. I.).—Am. J. Pharm. 1910, v. 82, p. 126.

Blanchi, A., discusses table II of the Ph. Ital. III, which gives a list of indispensable apparatus and utensils.—Boll. chim. farm. 1910, v. 49, pp. 792–796, 971.

Lamanna, P. A., replies to Blanchi.—*Ibid.* p. 895.

Zambler, A. (Gaz. Osp.) states that the Ph. Ital. III includes a notable display of proprietaries and is the only Pharmacopœia thus distinguished. He does not comment on their value but remarks that their inclusion in the Pharmacopœia is an effective form of official advertising in favor of the richer manufacturing firms.—J. Am. M. Ass. 1910, v. 55, p. 878.

5. FRENCH.

Ribaut, H., states that the Ph. Fr. V is not merely retouched but is in a measure a new work in a different spirit. It would be surprising if a work of such importance, in spite of the high competence of the savants to whom we owe it, should attain perfection at the first stroke. As evidence to the contrary, he enumerates among the critics: Astruc and Dejean, Bridel, Bourdet, Caron and Raquet, Chapelle, Collard, Couraud, Desesquelle, Fauzouin, Fonzes-Diacon, Harlay, Lemaire, Manseau, Mansier, Merck, Poulenc, Rabet, Ribon, Schimmel, Voiry, Ydrac, le Syndicat le la Droguerie française, etc. He thinks each one should make it a duty to collaborate in perfecting the Pharmacopœia by making known the points in which it appears to be defective.—Bull. sc. pharmacol. 1910, v. 17, p. 141.

Dunning, H. A. B., reviews the French Codex, calls attention to a number of the more characteristic features and reviews more particularly the ointments, syrups and tinctures included in that book.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1151–1157.

Wilbert, M. I., states that the Ph. Fr. V contains upward of 640 fewer titles than did the Codex of 1884, and that in France an article not embraced in the present Codex is considered official if it appeared in the previous edition.—*Ibid.* p. 1156.

An unsigned article (Am. Druggist, 1910, v. 56, pp. 234–236) reviews the history of the Ph. Fr., and discusses the method of revising the book, it also calls attention to some of the many characteristic features of the Ph. Fr. V.

Raubenheimer, Otto, discusses the composition of the commission for the revision of the French Codex.—Practical Druggist, 1910, v. 28, p. 71.

Pégurier, G., asks why a much larger number of practitioners [pharmaceutical?] do not have at least a consultative voice in the Codex commissions.—Rép. pharm. 1910, v. 22, p. 338.

A correspondent (Chem. & Drug. 1910, v. 76, p. 689) notes that the French Minister of Public Instruction has just nominated a special and permanent committee for preparing the future edition of the

Codex Medicamentarius. It will also undertake the preparation of any supplements of the 1908 Codex. The committee consists of twenty-three members, and includes the most distinguished pharmacists in Paris, such as Guignard, Bourquelot, Buchet, Henri Gautier, Grimbert, Jungfleisch, Leger, Murty, Moureu, Perrot and Crinon.

An editorial (Rev. Am. Farm. y Med. 1909–10, v. 14, pp. 44–45) reviews the Ph. Fr. V and calls attention to some of the changes and the more characteristic features of that book.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 603) enumerates the new remedies included in the Ph. Fr. V, 1908.

Martin, Henri, discusses the authority of the Codex, deception, etc.—J. pharm. et chim. 1910, v. 1, pp. 562–568; v. 2, pp. 86–96.

6. SERVIAN.

An unsigned article (Pharm. Post, 1910, v. 43, pp. 169–170) reviews the Ph. Serb. II and calls attention more particularly to the strength of the various galenical preparations.

Gehe & Co. (Handels-Bericht, 1910, p. 43) review the Ph. Serb. II and point out that in scope and contents this Pharmacopœia has much in common with the Ph. Svec. IX and that it appears to represent recent progress in pharmacy and also recognizes the international standards for potent medicaments.

Wilbert, M. I., points out that the recently published "Pharmacopœia Serbica, Edito secunda," embodies several interesting innovations. To overcome the criticism that deleted articles are no longer subject to any official requirements it is provided that when an article not official in the second edition, but described in the first edition of the Servian Pharmacopœia, is prescribed by a physician, the article, as dispensed, must comply with the requirements laid down in the former edition of the Pharmacopœia. The provisions of the Brussels Conference are closely adhered to. Physical and chemical tests have been added. Patented chemicals are introduced and described under their chemical titles.—Am. J. Pharm. 1910, v. 82, p. 260.

7. SWEDISH.

An unsigned article (Am. Druggist, 1910, v. 56, p. 136) discusses the method of revising the Pharmacopœia of Sweden, and calls attention to some of the more characteristic features of the book, which is said to resemble the German Pharmacopœia.

Andresen, S., presents a comprehensive review of the Ph. Svec. IX and calls attention to the changes embodied in it; also calls attention to many of the chemical tests and the characteristic formulas for galenical preparations.—Apoth. Ztg. 1910, v. 25, pp. 29–30; 37–38; 45–46; 52–53; 62–63; 70–71; 78–79; 87–88.

Wilbert, M. I., calls attention to a recent review of the Ph. Svec. IX.—Am. J. Pharm. 1910, v. 82, p. 126.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 604) enumerates the synthetic remedies included in the Ph. Svec. IX, 1908.

8. DANISH.

An unsigned article (Am. Druggist, 1910, v. 56, p. 136) discusses the methods of revising the Pharmacopœia of Denmark, and calls attention to some of the more characteristic features of that book.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 603) enumerates the new remedies included in the Ph. Dan. VII, 1907.

9. SWISS.

An unsigned article (Am. Druggist, 1910, v. 56, pp. 194–195) reviews the history of the evolution of the national Swiss Pharmacopœia, describes the method of revising the book, and calls attention to many of the characteristic features of this Pharmacopœia.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 604) enumerates the new remedies included in the Ph. Helv. IV, 1907.

10. AUSTRIAN.

An unsigned article (Am. Druggist, 1910, v. 56, p. 79) reviews the method of revising the Austrian Pharmacopœia and the nature and contents of the book.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 604) enumerates the new remedies included in the Ph. Austr. VIII, 1906.

11. BELGIAN.

An unsigned article (Am. Druggist, 1910, v. 56, p. 138) discusses the composition and the method of revising the Pharmacopœia of Belgium, and points out that the proposed text of the new Pharmacopœia was submitted to the professional press for publication, and that the medical and pharmaceutical associations were consulted freely in connection with the revision.

Motter, Murray Galt, reviews the Ph. Belg. III and calls attention to a number of the characteristic features of that book. He points out that in the matter of admissions and eliminations, practical usage and real utility were adopted as the guiding principles.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1146–1150.

An unsigned article (Rev. Am. Farm. y Med. 1909–10, v. 14, pp. 187–188) calls attention to some of the characteristic features of the Ph. Belg. and outlines the method of revising the book.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 603) enumerates the new remedies included in the Ph. Belg. III, 1906.

12. JAPANESE.

Takamine, J., reviews the Ph. Japon. III, presents a historical sketch of the three editions, discusses the scope of the present edition, and calls attention to the several classes of preparations that are included in it.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1194–1201.

Kraemer, Henry, calls attention to some of the features of the Ph. Japon. III and points out that the book is issued by the Japanese Government and is a very practical and well arranged work.—Am. J. Pharm. 1910, v. 82, p. 99.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 603) enumerates the new remedies included in the Ph. Japon. III, 1906.

13. DUTCH.

An unsigned article (Am. Druggist, 1910, v. 56, p. 137) discusses the method of revising the Pharmacopœia of Holland, calls attention to some of the more characteristic features of that book, and points out that it is published direct by the Government in Latin and Dutch editions in separate volumes.

Kraemer, Henry, presents a review of the Ph. Ndl. IV, in which he discusses more particularly the pharmacognostic descriptions included in that book.—Am. J. Pharm. 1910, v. 82, pp. 516–526. See also Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1202–1210.

van der Wielen, P., reviews the additions to the Ph. Ndl. IV, and calls attention to a number of changes that are embodied in the pamphlet.—Pharm. Weekblad 1910, v. 47, pp. 1240–1242.

Schamelhout, A., reviews the first supplement to the Dutch Pharmacopœia.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, pp. 353–362.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 604) enumerates the new remedies included in the original edition of the Ph. Ndl. IV, 1905.

Kraemer, Henry, points out that in the case of the Netherlands Pharmacopœia, the Brussels Protocol was incorporated some nine months before the international treaty was signed and that each one of the international preparations included in this book had after its title the abbreviation "F. I." (Formula Internationale).—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 800–801.

14. SPANISH.

Craig, Hugh, reviews the Ph. Hisp. VII, calls attention to some of the characteristic features of the book and also points out some of the examples of mediæval pharmacy continued in it.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1211–1217.

Raubenheimer, Otto, thinks that the Spanish Pharmacopœia is the poorest in Europe.—*Ibid.* p. 1217.

An unsigned article (Am. Druggist, 1910, v. 56, p. 273), in discussing the Ph. Hisp., points out that in some respects the elaboration of this Pharmacopœia resembles the method adopted in Great Britain, but the similarity lies mainly in the fact that both are officially issued by a medical corporation. The article outlines the method of revising the Pharmacopœia and calls attention to some of the characteristic features of the present seventh edition.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 604) enumerates the new remedies included in the Ph. Hisp. VII, 1905.

15. BRITISH.

Gadd, H. Wippell, presents a paper on the origin, scope and authority of the British Pharmacopœia.—Lancet, 1910, v. 178, pp. 1220–1222.

The Chemist and Druggist (1910, v. 76, p. 815) announces the appointment of the Ph. Brit. Committee as follows: "Sir Donald McAlister (Chairman), Dr. Norman Moore, Sir George Philipson, Dr. Caton, Dr. Barrs, Sir Thomas Fraser, Dr. McVail, Sir John Moore, and Sir William Whitla."

The British Medical Journal (1910, v. 1, p. 1373) reports that the revision of the pharmacopœia is progressing, and it is proposed that the results of the work done up to the end of 1909 shall be published and submitted to professional criticism.

The Chemist and Druggist (1910, v. 77, p. 20) reprints the recommendations of the Committee of Reference in Pharmacy of the General Medical Council, in connection with the revision of the Ph. Brit.

The Second Report of the Committee of Reference in Pharmacy to the Pharmacopœia Committee of the General Medical Council embodying the results of work accomplished in connection with the revision of the British Pharmacopœia, from November 18th, 1908, to December 16th, 1909, together with recommendations supplementary to those contained in the Report of 1908, is reprinted.—Brit. & Col. Drug. 1910, v. 58, pp. 12–14; 28–29.

An editorial (Pharm. J. 1910, v. 31 (85), p. 2) calls attention to the second report of the Committee of Reference in Pharmacy of the General Medical Council embodying the work in connection with the revision of the Ph. Brit. from November, 1908, to December 16, 1909, with recommendations supplementary to those contained in the Report of 1908. Copies of the Report can be obtained from Messrs. Spottiswoode and Company, Limited, 5, New Street Square, London, price 1s. each.

For comments see Brit. M. J. 1910, v. 2, p. 100; Lancet, 1910, v. 179, p. 113; J. Am. M. Ass. 1910, v. 55, p. 789; Am. J. Pharm. 1910, v. 82, p. 446.

An unsigned article (Am. Druggist, 1910, v. 56, pp. 271–272) reviews the method of revising the British Pharmacopœia, comments on the history of the book, outlines the method of revising the present fourth edition, and describes at some length the composition and content of that book.

Gane, E. H., presents a comparison of the British and U. S. Pharmacopœias. He discusses nomenclature and describes and compares the galenical preparations of the two books, pointing out the extent to which they differ.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1160–1167.

Hill and Umney present a proposed series of monographs for the forthcoming edition of the Ph. Brit.—Pharm. J. 1910, v. 30 (84), pp. 177–181.

Schimmel & Co. (Semi-Annual Report, April, 1910, pp. 133–141) present a critical study of the proposed requirements for essential oils to be included in the Ph. Brit.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 604) enumerates the synthetic remedies included in the Ph. Brit. IV, 1898.

The Chemist and Druggist (1910, v. 77, p. 935) gives a brief abstract of the discussion before the Edinburgh Chemists', Assistants', and Apprentices' Association on the Ph. Brit. as a standard under the food and drugs acts.

16. BRITISH PHARMACEUTICAL CODEX.

An editorial (Pharm. J. 1910, v. 31 (85), p. 1) calls attention to the forthcoming edition of the B. P. C., and asks for suggestions of additions and alterations.

An editoral (*Ibid.* p. 201) calls attention to the report of C. B. Allen for the Codex Revision Committee, and expresses the hope that practical pharmacists will experiment in the making of these preparations, and submit their results for revision. Work of this kind will be of value to the committee, and certainly in no small degree an education to the pharmacist undertaking it.

The Codex Revision Committee publish (in Pharm. J. 1910) suggested new formulas and alterations, with the request that they be reviewed by pharmacists and that criticisms and further suggestions be forwarded to the office of the committee.

3. COMMENTS ON U. S. P. VIII RELATIVE TO THE REQUIREMENTS OF THE BRUSSELS CONFERENCE.

Alpers, William C., discusses some of the peculiar features of the Pharmacopœia of the United States and expresses the belief that in no other country does the Pharmacopœia represent to the same extent and in every detail the active life of the two professions, pharmacy and medicine.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1223–1226.

Raubenheimer, Otto, thinks that the high position, which the Pharmacopœia of the United States occupies at present, can only be kept up if we adopt the progress of the other nations. The United States, England, Germany and Austria certainly lead in practical pharmacy, France and Switzerland being more productive scientifically, than practically and technically. It is a well known fact that the chemical and, to some extent, also the botanical part of the U. S. P. VIII is far superior to that of any of the foreign pharmacopœias. The galenical part, however, decidedly needs improvement.—*Ibid.* pp. 1138–1139.

Remington, Joseph P., points out that our country is awakening to the fact that whether we want to live to ourselves or not, we are now an integral part of the Congress of Nations.—Abstr. Proc. U. S. P. C. 1910, p. 31.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 195) states that the U. S. P. was one of the first pharmacopœias to take cognizance of the international agreement, and the U. S. P. IX will, no doubt, still further conform to the standards proposed for all national pharmacopœias.

Coblentz, Virgil, declares that a number of important changes must be made in the U. S. P. strength of potent remedies to comply with the terms of the Brussels Conference. Since the last agreement in 1906, 13 pharmacopœias have appeared. Before this, in a total of 230 titles, 131 did not comply with international standards. Now all but 15 articles comply, showing what wonderful strides are being taken in bringing about what might be called an International Pharmacopœia.—Proc. Maine Pharm. Ass. 1910, p. 44.

Wilbert, M. I., thinks it is probable that no one feature of the U. S. P. VIII has been more severely criticised abroad than the failure to comply more fully with the provisions of the Brussels Protocol; and our failure to live up to these requirements has no doubt influenced at least some of the committees or commissions revising the pharmacopœias of other countries and prevented a more complete compliance on their part.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1144.

Wood, H. C., points out that the Committee of Revision of the U. P. Pharmacopœial Convention has in a great measure conformed to the recommendations of the Brussels Protocol, but the failure to do so completely seems to him the one blot on their work.—Abstr. Proc. U. S. P. C. 1910, p. 14.

Beringer, George M., thinks that some of the criticisms directed at the U. S. P. in connection with its compliance or non-compliance with the recommendations of the Brussels Conference, are hardly fair as the critics should know that at the time this treaty was signed the 8th Revision was most likely going through the press and the time would not permit of a more thorough consideration of many of the debatable questions or radical changes proposed in the recommendations.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

The Bulletin of Pharmacy (1910, v. 24, p. 239) reports that at the A. Ph. A. meeting it was generally felt that while every reasonable effort ought to be made toward world-wide uniformity, it was impossible to adopt some of the provisions of the Brussels Protocol.

Francis, J. M., has no doubt but that the recommendations of the Brussels Conference will be followed still further in the course of the ninth revision. Of course, it will always be necessary to keep in mind the somewhat different conditions which prevail in the United States as compared with those in Europe.—Proc. Michigan Pharm. Ass. 1910, p. 44.

Xrayser II, commenting on the action of the U. S. P. C. with reference to the reservation about the details of pharmaceutical processes of the International Convention, asks: What are the "details" that may be modified? Do they include the strength of the alcohol employed in making tinctures, or the method of preparing percentage galenicals? If either or both of these are regarded as details which may be varied at will, then the International Agreement might just as well never have been adopted at all so far as the U. S. P. is concerned. He hopes the U. S. P. IX may be freed from the blot of failure to follow the percentage system formulated by the Brussels Conference.—Chem. & Drug. 1910, v. 76, p. 849.

Jensen, Peder, deplores the fact that the proposed support by the American pharmacists and Government of an International Pharmacopœia Bureau in Belgium was not encouraged.—Pacific Drug Review, 1910, v. 22, Aug., p. 20. (See also Oct. p. 16.)

SPANISH EDITION OF THE U. S. P. VIII.

Remington, Joseph P., thinks that the publication of the U. S. P. in Spanish was one of the achievements of the Board of Trustees and Committee of Revision.—Abstr. Proc. U. S. P. C. 1910, p. 30.

An editorial (Rev. Am. Farm. y Med. 1909–10, v. 14, p. 4) calls attention to the Spanish translation of the Pharmacopœia of the United States.

An editorial note (Meyer Bros. Drug. 1910, v. 31, p. 132) asserts that the Spanish translation of the United States Pharmacopœia has met with a ready sale in the Spanish-speaking countries adjacent to the United States. Cuba has made this pharmacopœia official and a legal regulation requires every pharmacist in that country to have a copy of the work.

Austin, A. O., reports that the Spanish translation of the U. S. P. has been very heartily received by the Island Possessions and South

American countries using the Spanish language and it is expected to pay for its own expense of translation and publication with an added profit.—Proc. Vermont Pharm. Ass. 1910, p. 83.

Wood, H. C., thinks that since the Spanish translation of the U. S. P. has become the official Pharmacopœia of Cuba the University of Havana should be given the inherent right to send delegates to the Convention because to the University of Havana we ought to look for the translation of the Pharmacopœia into the Spanish language.—Abstr. Proc. U. S. P. C. 1910, p. 11.

Mayo, Caswell A., reports that the U. S. P. Spanish edition is selling steadily all over Spanish America, especially on the West Coast.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1223.

Dohme, A. R. L., states that the excellent Spanish of the translation of the U. S. P. has been an important factor in popularizing the work in Spanish America.—Proc. North Carolina Pharm. Ass. 1910, p. 77.

Wilbert, M. I., thinks that the publication of the Spanish edition of the U. S. P. will have a broadening influence on American pharmacy, in that it will tend to bring our Pharmacopœia more directly in competition with the corresponding standards of Continental Europe, and will thus serve to expose the shortcomings of our ideas and practices in a way that could never be done at home.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1222.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 176) points out that the demand for the Spanish translation of the U. S. P. has been so great that a second edition has resulted.

Wilbert, M. I., discusses the desirability of developing greater uniformity in the nomenclature and strength of medicines used in North and South America and calls attention to some of the variations now existing.—Am. J. Pharm. 1910, v. 82, pp. 305–314.

Table showing comparative strength of preparations of potent medicaments included in the Brussels Conference Protocol and in the several pharmacopœias used in North and South America.

	P. I. 1902	Ph. Brit. IV 1898 and B. P. C.	U. S. P. VIII 1905 and Spanish Edition 1909	Ph. Mex. IV 1904	Ph. Fr. V 1908	Ph. Hisp. VII 1905	Ph. Venz. I 1898	Ph. Germ. IV 1900	Ph. Chili I 1886	Ph. Arg. I 1898
Aconitum napellus (L):										
Tinctura aconiti										0
Strength	10	5w/v	10w/v	10	10	10	20	10	10	
Menstruum	A70	A . 70	A7+W3	A70	A70	A70	A60	A70	A60	
Atropa belladonna (L):										
Tinctura belladonnæ		0						0		
Strength	10		10w/v	10	10	10	20		10	20
Menstruum	A70		Dil. A	A70	A70	A70	A60		A60	A60
Extractum belladonnæ										
Menstruum	A70	A70	A2 W1	A60	A70	A70	A60	W–A	A40	W
Colchicum autumnale (L):										
Tinctura colchici										
Strength	10	20w/v	10w/v	10	10	10	20	10	10	20
Menstruum	A70	A . 45	A6 W4	A70	A70	A70	A60	A70	A60	A60
Digitalis purpurea (L):										
Tinctura digitalis										
Strength	10	12+5w/v	10w/v	10	10	10	20	10	10	20
Menstruum	A70	A60	Dil. A	A70	A70	A70	A60	A70	A60	A60
Uragoga ipecacuanhæ (Baill):										
Tinctura ipecacuanhæ		0	0					0		
Strength	10			10	10	10	20		20	20
Menstruum	A70			A70	A70	A70	A60		A60	A60
Syrupus ipecacuanhæ										
Strength	1	2w/v	7	1	lex	1	1	1	2	1
Hyoscyamus niger (L):										
Tinctura hyoscyami								0		0
Strength	10	10w/v	10w/v	10	10	10	20		10	
Menstruum	A70	A . 45	Dil. A	A70	A70	A70	A60		A60	

Table showing comparative strength of preparations of potent medicaments included in the Brussels Conference Protocol and in the several pharmacopœias used in North and South America—Continued.

	P. I. 1902	Ph. Brit. IV 1898 and B. P. C.	U. S. P. VIII 1905 and Spanish Edition 1909	Ph. Mex. IV 1904	Ph. Fr. V 1908	Ph. Hisp. VII 1905	Ph. Venz. I 1898	Ph. Germ. IV 1900	Ph. Chili I 1886	Ph. Arg. I 1898
Hyoscyamus niger (L)—Continued										
Extractum hyoscyami								0		
Menstruum	A70	A . 70	A6 W4	A60	A70	A70	A60	....	A60	W
Strychnos nux vomica (L):										
Tinctura nucis vomicæ										
Strength	10	16 . 6w/v	2w/vEx	10	10	10	20	10	10	20
Menstruum	A70	A70	A75 W25	A70	A70	A70	A60	A70	A80	A80
Extractum nucis vomicæ										
Menstruum	A70	A70	W. AcAcet	A80	A70	A70	A80	A70	A80	A8W1
Opium:										
Extractum opii										
Requirement	20	20	20	20	20	20	20–24	20	30	20
Tinctura opii										
Strength	10	7 . 5w/v	10w/v	10	10	10	10	10	10	10
Menstruum	A70	A50	Dil. A	A70	A70	A70	A60	A70	A60	A60
Tinctura opii crocata			0		0		0			
Strength	10	5w/v	....	10	....	10	....	10	10	20
Menstruum	....	Sherry	....	A30	....	Wine	....	A35	A20 wine	A30
Pulvis ipecacuanhæ et opii							0			
Requirement	10	10	10	10	10	10	....	10	10	10
Tinctura opii camphorata						0				
Requirement	0.5	0 . 45w/v	0.4	0.5	0.5	....	0.5ex	0.5	0.5	0.5
Tinctura strophanthi									0	
Strength	10	2 . 5w/v	10w/v	10	10	10	20	10	....	20
Menstruum	A70	A70	A65W35	A70	A70	A70	A60	A70	....	A60
Sclerotium clavicepitis purpurea (Tul.):										
Extractum ergotæ										

Menstruum	W	60	AW	W	W	W	W	W	W	A8W4
Fluidextractum ergotæ									0	
Strength	100	100w/v	100w/v	100	100	100	100	100		100w/v
Menstruum		W+		A60	W+		A60	A20		A3W4
Acidum hydrocyanicum dilutum								0	0	0
Requirement	2	2w/v	2	1	2	2	1			
Aqua amygdalæ amaræ				(?)	0	0	0		0	0
Requirement	0.10	0	0					0.1		
Aqua laurocerasi			0	(?)			0	0		0
Requirement	0.10	0.1			0.1	0.10			0.05	
Aqua phenolata		0	0	0			0	0	0	0
Requirement	2				2	2				
Sodii arsenas								0		
Requirement	Cryst.	Anh.	Cryst.	Cryst.	Cryst.	Cryst.	Cryst.		Cryst.	Cryst.
Liquor potassii arsenitis							0			0
Requirement	1	1	1	1	1	1		1	1	
Syrupus ferri iodidi										
Requirement	5	10	5	1		5	0.6	5	2	0.5
Tinctura cantharidis										
Strength	10	1 . 25w/v	10w/v	10	10	10	10	10	10	10
Menstruum	A70	A . 90	A95	A70	A70	A70	A80	A90	A80	A80
Tinctura iodi						0				
Strength	10	2 . 5w/v	7	10	10		10	10	10	8.33
Menstruum	A95	A90	A95	A95	A95		A90	A90	A90	A90
Tinctura lobeliæ										
Strength	10	12 . 5w/v	10w/v	10	10	10	20	10	10	20
Menstruum	A70	A60	Dil. A	A70	A70	A70	A60	A70	A70	A60
Cocainæ hydrochloridum							0		0	
Requirement	Anh.	Anh.	Anh.	Anh.	Anh.	Anh.		Anh.		Anh.
Unguentum hydrargyri										
Strength	30	48	50	30	50	30	50	33	50	50
Requirement		33	25			50	12		25	25
Vinum antimonii					0					
Strength	0.4	0.457	0 . 4w/v	0.3		0.4	0.3	0.4		0.4

III. COMMENTS ON OFFICIAL ARTICLES.

ACACIA.

Fichtenholz, A., quotes Tschirch as authority for the statement that the word gum is of Egyption origin and comes from *kami*, met with in the seventeenth century B. C.—J. pharm. et chim., 1910, v. 2, p. ii.

The Chemist and Druggist (1910, v. 76, p. 778) quotes, with illustrations, some data as to the collection of gum acacia, from the third report of the Wellcome Research Laboratories, Khartoum.

Meininger, E., in a contribution to our knowledge of gums, reports a systematic examination of samples of gums in the pharmacognostic collection of the Pharmaceutical Institute in Strassburg. Also presents a tabulated review of reported examinations of important varieties of gums.—Arch. d. Pharm., 1910, v. 248, pp. 171–201.

Caesar and Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 38) point out that the Ph. Germ. V recognizes only the acacia of African origin and limits the ash to a maximum of 5 per cent.

Schweissinger, O., describes a purified gum arabic made by dissolving the gum in water, filtering and drying the filtered product in a vacuum apparatus.—Pharm. Zentralh., 1910, v. 51, pp. 1027–1028.

LaWall and Bradshaw report finding 2.85 per cent of ash in acacia.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 751.

Goeckel, Henry J., reports that of four samples of acacia examined the ash yield was No. 1 quality, 3.05 per cent, and 3.09 per cent for No. 2; 2.8 per cent for No. 3; and 3.17 per cent for No. 4.—*Ibid.*, p. 1048.

Dohme and Engelhardt state that the Ph. Hung. III directs that gum arabic should yield not more than 5 per cent of ash.—*Ibid.*, p. 1184.

Kaiser, W. F., outlines a formula for mucilage of acacia in which he uses 7.5 per cent of glycerin as a preservative.—Drug Topics, 1910, v. 25, p. 215.

Eberle, E. G., thinks that mucilage of acacia should be made fresh when needed by simple solution in water and omit the lime water.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 781.

Thome, E. R., thinks that 5 per cent alcohol is necessary as a preservative of mucilage of acacia.—Practical Druggist, 1910, v. 28, p. 123.

Caesar and Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 41) express the belief that the Ph. Germ. V method for making mucilage of acacia is a rational one and that the precautions for keeping will be found to be satisfactory.

Whitney, Mrs. D. V., states that the sugar in mixture of acacia has a tendency to cause fermentation. She sees no practical use for this preparation.—Proc. Missouri Pharm. Ass., 1910, v. 58, p. 105.

An unsigned abstract (Südd. Apoth. Ztg., 1908, p. 570) states that gum arabic, by reason of its oxydase, is incompatible with morphine, eserine and adrenalin, unless the oxydase is destroyed by previous heating to 100°.—Nouv. remédes, 1910, v. 26, p. 161.

ACETANILIDUM.

Seidell and Wilbert point out that a rapid procedure for the analysis of acetanilide is to be found in the bromate titration method proposed by Seidell in 1907.—Am. J. Pharm., 1910, v. 82, p. 67.

Menge, George A., in a study of melting point determinations, reports on 6 samples of acetanilide which were found to melt at from 113.3° to 114.1°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, p. 83. (See also Proc. Am. Pharm. Ass., 1910, v. 58, p. 1042.)

Eldred, Frank R., reports that the melting points of thirty-eight lots examined during the last three years varied from 112° to 113.5°. A sample which melted at 112.5° was recrystallized several times from alcohol and then melted at 115°. The melting point of acetanilide is variously stated as 112° to 120°. As it seems to be impossible to obtain acetanilide commercially which melts much above 113°, the limiting temperatures might be made 113° and 116°.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 889.

Dohme and Engelhardt state that the Ph. Hung. III directs the following test for the detection of acetanilide: When acetanilide is heated in a dry test tube with an equal amount of dry zinc chloride to 250° an odor of locust flowers is developed.—*Ibid.*, p. 1172.

Puckner and Warren report on the estimation of acetanilide in the presence of sodium bicarbonate and caffeine.—Rep. Chem. Lab. Am. Ass., 1910, v. 3, p. 50.

Emery, W. O., reports comparative results on the determination of acetanilide in mixtures containing it.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 184. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

The text of the decision of the Supreme Court of the District of Columbia, denying the legality of the amended regulation 28, which requires the maker to place on the label the name of the original substance whence any constituent is derived which under the law is required to be stated on the label, is reprinted.—Am. Druggist, 1910, v. 57, pp. 353–354. (See also Practical Druggist, 1910, v. 28, p. 157.)

A news note (Pharm. Era, N. Y., 1910, v. 43, p. 914) calls attention to notice of judgment 355 and 457 regarding preparations in which the acetanilide content is generally misstated.

An editorial (Nat. Druggist, 1910, v. 40, pp. 57–58) calls attention to and commends the compilations of material by Boone regarding the harmlessness of acetanilide. See also Northwestern Druggist, 1910, v. 11, Feb., p. 52.

Whitehead, L. G., presents a paper on the coal-tar derivatives of the U. S. P.—Proc. Virginia Pharm. Ass., 1910, pp. 75–95.

Carr, Gloria, contributes a study on the action of acetanilide on isolated cardiac muscle.—J. Pharmacol. & Exper. Therap., 1910–11, v. 2, p. 399.

An editorial (Therap. Gaz., Detroit, 1910, v. 34, pp. 19–20) discusses the value of acetanilide, caffeine and sodium bicarbonate when used in combination.

Sajous, Charles E. deM., in comparing the action of coal tar derivatives with that of opiates, expresses the belief that acetanilide is of inappreciable value in the hands of the physician and is practically inoffensive as the origin of a drug mania.—Am. Druggist, 1910, v. 56, p. 135.

Monroe, A. Leight, quotes B. W. Egan who asserts that although the coal tar products give ease they are harmful if the doses are large and often fail if the doses are moderate.—Hahnemann. Month., 1910, v. 45, p. 470.

Coblentz, Virgil, reports that some physicians object to the retention of Pulv. Acetanilidi Comp., while their colleagues prescribe tons of this mixture.—Proc. Maine Pharm. Ass., 1910, p. 43.

ACETONUM.

Eldred, Frank R., reports that the specific gravity of acetone at 15° has been found to vary from 0.797 to 0.801. Most lots distilled completely between 56° and 57°, and met the official requirement in regard to residue and behavior with potassium permanganate.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 889.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 5) in a comparison of the pure grades of acetone from different sources, present the figures obtained, and assert that these figures indicate that no single constant is sufficient to determine the purity of a sample.

Krauss, Ludwig, discusses the iodometric estimation of acetone.—Apoth. Ztg., 1910, v. 25, p. 22.

Leubner, Bernard O., discusses the detection of acetone in methyl alcohol.—Merck's Rep., 1910, v. 19, pp. 186–188.

Batik discusses the harmful action of sunshine on acetone.—Chem. Ztg., 1910, v. 34, p. 735.

von Herff, O. (L'Union pharm., 1910, 51, 212) calls attention to the use of equal volumes of alcohol and acetone for sterilizing the skin. He thinks this one of the best means for the surgical disinfection of the skin, prior to operation.—Year-Book of Pharmacy, 1910, p. 206.

McWalter, J. C., comments on the alleged poisonous action of acetone, and states that his experience leads him to think that its toxic action, above that of alcohol, is negligible; being more soluble in water than ether, it should be, when well diluted, a good tincture basis.—Pharm. J., 1910, v. 30 (84), p. 810.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, p. 64) calls attention to several contributions on the treatment of uterine carcinoma by acetone.

See also J. Am. M. Ass. and Index Medicus.

ACETPHENETIDINUM.

Menge, George A., in a study of melting point determinations, reports on 7 samples of phenacetin which were found to melt at from 133.6° to 134.6°, corrected.—Bull. No. 70, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, p. 84. See also Proc. Am. Pharm. Ass., 1910, v. 58, p. 1042.

Bernegau, L. H., reports that, of 11 samples of acetphenetidin examined, 6 melted below 134°, the lowest at 132° and the highest at 134°.—Proc. Pennsylvania Pharm. Ass., 1910, p. 133.

Eldred, Frank R., reports that the melting points of 15 lots varied from 133° to 134.5°, but one lot examined had a melting point of only 131°. Most of the lots from all of the manufacturers represented melted between 133° and 134°, and only one lot melted at 135°. As 135° is probably the melting point of pure acetphenetidin, a variation of melting point from 133° to 135° should be allowable.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 890.

Schaefer, George L., asserts that the test adopted by the U. S. P. for the determination of the presence of acetanilide cannot be used in its present form as even the purest acetphenetidin does not give a clear solution. He outlines a modification of this test which he believes to be more satisfactory and will show the presence of even less than 2 per cent of acetanilide.—Am. J. Pharm., 1910, v. 82, p. 221.

Rosengarten, George D., states that to determine the presence of acetanilide, acetphenetidin is boiled with sodium hydroxide, the solution cooled, agitated with chlorinated soda solution, when a clear yellow liquid should result, and not a purplish red or brown-red cloudy liquid or precipitate. Nevertheless, when making this test a precipitate is obtained, indicating the presence of acetanilide, although it could not be found by the bromine or other tests.—*Ibid.*, p. 30.

Emery, W. O., reports co-operative results on the determination of acetphenetidin in mixtures containing it.—Proc. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 185. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Wotring, R. J., points out that phenacetin with salol alone produces dry powders, but the addition of a small amount of camphor to the mixture causes liquefaction.—Am. J. Pharm., 1910, v. 82, p. 241.

Herzberg, Roman, in an additional contribution on the influence of antipyretics on the action of narcotics reports observations on the influence of phenacetin on the action of morphine and of urethane.—Ztschr. exper. Path. u. Therap., 1910, v. 8, pp. 577–579.

Wood, H. C., Jr., commenting on the multiplicity of new renedies, says it is beyond comprehension how substituting for the acetyl radical that of some other organic acid can alter the therapeutic properties of the compound and yet the manufacturers have burdened our literature, to say nothing of the druggist's shelves, with lactylphenetidin, citrylphenetidin, salicylphenetidin, and so on. There is no satisfactory evidence that any of these can accomplish more than the official representatives of the series or that they are less dangerous in their secondary effects.—J. Am. M. Ass., 1910, v. 55, p. 30.

ACIDUM ACETICUM.

Seidell, Atherton, reports experimental determinations on the distribution of acetic acid between water and several immiscible organic solvents at 25°.—Bull. No. 67, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, p. 12.

Delphin, T., reports observations on the contamination of acetic acid.—Svensk farm. Tidskr., 1910, v. 14, pp. 297–300.

Behrens and Behrens, in German patent 223,208, November 17, 1908, outline a process for obtaining acetic acid from alcohol by oxidation processes.—J. Soc. Chem. Ind., 1910, v. 29, p. 948.

Gehe & Co. (Handels-Bericht 1910, p. 97) in reviewing the vinegar situation in Germany, point out that despite the fact of an additional tax on acetic acid vinegar the latter has so many advantages over the fermentation variety that it will no doubt be able to retain its secure place as an article of consumption.

Arny, H. V., reports 16 samples submitted: 12 U. S. P.; the rest varying from 28.4 per cent to 32 per cent.—Proc. Ohio Pharm. Ass., 1910, p. 69.

Fincke, H., discusses the detection of formic acid in acetic acid.—Apoth. Ztg., 1910, v. 25, pp. 727–728.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 64–66) calls attention to the use of acetic acid for the detection of protein substances in physiological fluids.

ACIDUM ACETICUM GLACIALE.

Raubenheimer, Otto, points out that in Continental prescriptions acetic acid means glacial acetic acid. Acidum aceticum dilutum must not be confounded with our 6 per cent acid, as it ranges from 20 to 50 per cent in strength. The U. S. P. acidum aceticum dilutum of 6 per cent strength corresponds to the acetum of the foreign pharmacopœias.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1138.

Riedel's Berichte (1910, p. xxvi) points out that the Ph. Germ. IV requires that acetic acid contain at least 96 per cent of absolute acid and have a boiling point of from 117° to 118°. It points out that a 96 per cent acid begins to boil at 110° and suggests that either one figure or the other be changed.

Rosengarten, George D., asserts that the test for empyreumatic substances in glacial acetic acid is very strenuous, and compares it with that of the Ph. Germ.—Am. J. Pharm., 1910, v. 82, p. 30.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 27) still find the greater part of glacial acetic acid offered to indicate 97 to 98 per cent real acetic acid. As they have noted before, they prefer the determination of melting point as the best indication of the strength of the acid, adopting 14.8° as the minimum figure allowable.

Klein, Fred., outlines a test for differentiating anhydrous acetic acid from glacial acetic acid by the use of selenious acid (SeO_2).—J. Ind. & Eng. Chem., 1910, v. 2, p. 389.

Rivett and Sidgwick report observations on the rate of hydration of acetic anhydride.—J. Chem. Soc., 1910, v. 97, pp. 732–741.

Palmer, Chas. S., calls attention to the possible contamination of acetic anhydride used in the Liebermann-Storch reaction.—J. Ind. & Eng. Chem., 1910, v. 2, p. 104.

ACID ACETYLSALICYLIC.

Baumgarten, G., expects the next Pharmacopœia to contain acetylsalicylic acid but thinks it would be a great inconvenience to physicians to utterly ignore the name aspirin, and that the reason for suppressing it is pedantic.—Western Druggist, 1910, v. 32, p. 16.

The monograph for acetylsalicylic acid to be included in the Ph. Germ. V is reproduced.—Pharm. Zentralh., 1910, v. 51, p. 189.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 6) assert that the purity of acetylsalicylic acid is now quite satisfactory, the melting point ranging only from 134° to 135°. Isomers are evidently still on the market. One sample extracted from a proprietary article melted at 83°.

The United States Circuit Court of Appeals has upheld the decision of a lower court declaring the aspirin patent to be valid.—Bull. Pharm., 1910, v. 24, p. 269.

An editorial (Bull. Am. Pharm. Ass., 1910, v. 5, p. 4) questions the decision rendered by a United States judge that a product patent was valid simply because chloroform was used in the purification of the article, which it was conceded had been produced before in an impure state.

Gehe & Co. (Handels-Bericht 1910, p. 98) report that the quality of the available acetylsalicylic acid is frequently quite inferior.

"H. E. W." reports a case of idiosyncrasy to aspirin.—J. Am. M. Ass., 1910, v. 55, p. 1749.

Cooper, J. E. (West Virginia M. J., May 1910) reports a case of poisoning from the administration of 7.5 grains of aspirin every 30 minutes for 8 doses.—*Ibid.*, p. 87.

Needham, R. H., expresses the belief that the use of acetylsalicylic acid by physicians is rapidly increasing in favor, yet inquiry brings the reply that the number of prescriptions in which this drug enters is a poor index as to its use by the laity in self-medication. Reports bring the startling information that it is becoming a staple, supplanting acetanilide and other coal tar products.—Proc. Texas Pharm. Ass., 1910, p. 105.

Allan, John, considers acetylsalicylic acid the drug *par excellence* for the treatment of chorea.—Am. J. M. Sc., 1910, v. 139, p. 172.

The Budapest Correspondent (Lancet, 1910, v. 178, p. 961) notes that aspirin is indispensable at present and has been added to the new Ph. Hung. III.

ACIDUM BENZOICUM.

Sachsse, H., in German patent 216,091, Nov. 2, 1907, outlines a process for preparing benzoic acid from toluene by means of nitric acid.—J. Soc. Chem. Ind., 1910, v. 25, p. 45.

Schaefer, George L., recommends the use of 1 gm. benzoic acid and 10 cc. of sulphuric acid as the proper proportion in applying the U. S. P. sulphuric acid test.—Am. J. Pharm., 1910, v. 82, p. 222.

Seidell, Atherton, reports experimental determinations on the solubility of benzoic acid in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 0.37 gm. and 100 gm. of U. S. P. alcohol will dissolve 56.74 gm. of benzoic acid.—Bull. No. 67, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, pp. 23–25, 91.

Menge, George A., in a study of melting point determinations reports on 5 samples of benzoic acid which were found to melt at from 121.3° to 122.2°, corrected.—Bull. No. 70, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, p. 84. See also Proc. Am. Pharm. Ass., 1910, v. 58, p. 1048.

Brown, Linwood A., points out that owing to the fact that benzoic acid is distinctly volatile, at ordinary room temperatures, and that it is affected by light, turning darker, the Pharmacopœia has directed that "it should be kept in dark, amber colored, well stoppered bottles, in a cool place."—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 133.

Dohme and Engelhardt state that the Ph. Hung. III recognizes only the acid prepared from benzoin.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1171.

Van der Laan and Tijdens discuss the quantitative determination of benzoic acid in foods and report a number of analyses.—Chem. Weekblad, 1910, v. 7, pp. 603–615.

De Jong, A. W. K., (Rec. Trav. Chim. Pays-Bas, 1909, 28, 342–348) discusses the determination of benzoic and cinnamic acids in the presence of each other.—J. Soc. Chem. Ind., 1910, v. 29, p. 112.

Heide and Jakob discuss the detection of benzoic acid, cinnamic acid and salicylic acid in wines.—Ztschr. Unters. Nahr. u. Genussm., 1910, v. 19, pp. 137–153.

Fischer and Gruenert present some observations on the detection of benzoic acid in meats and in fats.—*Ibid.*, v. 20, pp. 580–583.

Dunbar, P. B., discusses the modification of Mohler's test for benzoic acid, proposed by von der Heide and Jakob.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 113. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Koelker and Amberg present a communication in regard to the detoxification of benzoic acid by optical isomers of leucin.—J. Pharmacol. & Exper. Therap., 1910–11, v. 2, pp. 59–72.

A book review calls attention to the recently published work on the physiological action of benzoic acid and sodium benzoate by V. Gerlach, Wiesbaden, 1909 von Heinrich Staadt (v and) 95 pages, 8 vo, with 15 illustrations.—Pharm. Zentralh., 1910, v. 51, pp. 306–307.

Nussbaum reviews several recent contributions on the physiological action of benzoic acid and sodium benzoate. He refers more particularly to the monograph by Gerlach and a recent article by Meineke.—Schweiz. Wchnschr. Chem. u. Pharm., 1910, v. 48, pp. 165–166.

Herter, C. A., discussing some alleged effects of sodium benzoate and benzoic acid, criticises the paper of D. R. Lucas.—J. Am. M. Ass., 1910, v. 54, pp. 1774–1776.

An unsigned article (Midl. Drug., 1910, v. 44, pp. 157–172) discusses the benzoate dragon and calls attention to some misrepresentations that have been made in connection with the use of benzoic acid and sodium benzoate as preservatives.

ACIDUM BORICUM.

Nasini and Ageno discuss the solubility of boric acid in water at different temperatures.—Ztschr. physikal. Chem., 1910, v. 69, pp. 482–485.

Herz, W., discusses the influence of chlorides on the solubility of boric acid.—Ztschr. anorg. Chem., 1910, v. 66, pp. 358–360.

He also discusses the influence of oxalic acid on the solubility of boric acid.—Ztschr. anorg. Chem., 1909, v. 66, pp. 93–94.

Eldred, Frank R., points out that as glycerin is usually acid, even though the acidity can not be detected by litmus paper, this fact should be taken into consideration in the titration of boric acid.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 890.

Puckner and Hilpert outline a method for the estimation of free boric acid in the presence of borax.—Rep. Chem. Lab. Am. M. Ass., 1910, v. 3, p. 23.

Bertrand and Agulhon outline a method for the estimation of boric acid in complex mixtures and in particular in ash of organic origin.—Ann. chim. analyt., 1910, v. 15, pp. 89–93. Also Bull. Soc. chim. France, 1910, v. 7, pp. 125–130.

Price and Ingersoll report observations on the effect of nitrates and nitrites on the turmeric test for boric acid.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., pp. 115–116. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Lenz and Richter outline methods for the detection of perboric acid and similar combinations.—Arb. pharm. Inst. Univ. Berl. (1910), 1911, v. 8, pp. 74–80.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 16) report that boric acid is now obtainable commercially of a high degree of purity. In 80 samples lead was present only to the extent of 0.0001 to 0.001 per cent, and arsenic was always below 5 parts per 1,000,000. Traces of sulphates are the chief impurity, and a very constant one.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 27) find boric acid and borax to be practically free from lead and arsenic.

Mittelbach, Wm., thinks that ointment of boric acid is all right providing it is made up fresh when dispensed.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 792.

Dohme and Engelhardt state that the Ph. Hung. III directs that ointment of boric acid be prepared with paraffin, sesame oil, and glycerin.—*Ibid.*, p. 1194.

van Waerden, H., discusses the use of boric acid as a preservative and its detection.—Pharm. Weekblad., 1910, v. 47, pp. 626–639.

Bernstein, Julius, presents a preliminary note on a new aspect of the effects of boric acid as a food preservative, with a tabulated statement of the results of his investigation.—Brit. M. J., 1910, v. 1, p. 928. See also pp. 1085, 1146, 1326.

An editorial (J. Am. M. Ass., 1910, v. 54, p. 1617) discusses boric acid as a food preservative, and reviews the work of Julius Bernstein.

Coombe, Russell, commenting on Bernstein's communication, suggests a relation between appendicitis and boric acid as a food preservative.—Brit. M. J., 1910, v. 1, p. 1085.

Fayet and Goudou (Rep. Veter.) present some observations on the therapeutic value of crystallized boric acid used as an antiseptic.—Am. Vet. Rev., 1910, v. 37, p. 80.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, p. 66) quotes Eisenstein who recommends the use of powdered boric acid instead of calomel in eczematous affections of the conjunctiva and cornea.

ACIDUM CAMPHORICUM.

Seidell, Atherton, reports experimental determinations on the solubility of camphoric acid in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 0.76 gm., and 100 gm. of U. S. P. alcohol will dissolve 104.5 gm. of camphoric acid.—Bull. No. 67, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, pp. 31–33, 91.

Menge, George A., in a study of melting point determinations, reports on 6 samples of camphoric acid which were found to melt at from 183.5° to 185.4°, corrected.—Bull. No. 70, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, p. 85. See also Proc. Am. Pharm. Ass., 1910, v. 58, p. 1042.

Blanc and Thorpe review Komppa's synthesis of camphoric acid and criticize some of his conclusions.—J. Chem. Soc., 1910, v. 97, pp. 836–839. Also Bull. Soc. chim. France, 1910, v. 7, pp. 740–744.

Roth, George B., presents an experimental study of camphoric acid.—J. Pharmacol. & Exper. Therap., 1910–11, v. 2, pp. 405–419.

Levi, E. (Gaz. Osp. e Clin., 1910, v. 31, No. 29), reports 20 cases to demonstrate the efficacy of camphoric acid in the treatment of the sweats of phthisis. He found 2 gm. (30 grains) in 2 doses during the day or evening, effectual in many cases in which all other measures failed to relieve.—J. Am. M. Ass., 1910, v. 54, p. 1420.

ACIDUM CITRICUM.

Schimmel & Co., (Semi-Annual Report, April 1910, p. 54) report that the number of works in Sicily for the manufacture of citric acid and citrate of lime is very small. They discuss the present economic conditions in connection with the production of these two articles.

Skinner, Robert P., presents some additional notes on the production of synthetic citric acid in Germany and points out that while experiments progressed favorably economic results have not yet been attained.—Oil, Paint and Drug Reporter, 1910, v. 77, June 6, p. 28Z. See also *Ibid.*, April 11, p. 28H.

Smith, F. Willoughby, details the circumstances leading to the establishment of the Camera Agrumaria, which effectively controls the export of citric acid.—Cons. & Tr. Rep., Feb. 19, 1910, p. 4.

Gehe & Co. (Handels-Bericht 1910, p. 99) review the economic conditions of the citric acid market and point out that there has been a gradual reduction in the production of this article in recent years.

A news note (Oil, Paint and Drug Reporter, 1910, v. 78, August 22, p. 16) presents the material points in the act of July 17, governing the regulation of the production and marketing of citrate of lime and concentrated lemon juice in Italy.

Seidell, Atherton, reports experimental determinations on the solubility of citric acid in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 207.70 gm., and 100 gm. of U. S. P. alcohol will dissolve 116.0 gm. of citric acid.—Bull. No. 67, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, pp. 33-35, 91.

Spica, Matteo, in a pamphlet issued under the auspices of the Italian Ministry of Agriculture, gives his method for determining the citric acid content of citrates and concentrated lemon juice by measuring the volume of carbon monoxide evolved on heating with sulphuric acid. Further details are given in the abstract.—Chem. & Drug., 1910, v. 77, p. 620. See also Chem. Ztg., 1910, v. 34, pp. 1141–1142.

Hill, J. Rutherford, presents a paper on Pusch's test for citric acid, with the comment that it is the simplest, clearest, and most certain method for the determination of tartaric acid in citric acid.—Pharm. J., 1910, v. 30, (84), pp. 245–248.

Patch, Edgar L., points out that citric acid frequently contains free sulphuric acid equivalent to 1 per cent or 1.5 per cent of citric acid.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 741.

Cowie, W. B., examined three samples according to the suggestions of the Committee of Reference and found only one, even that on the border line, which did not come within the standard with every impurity except lead.—Pharm. J., 1910, v. 30 (84), p. 6.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 23) report that over 40 samples of citric acid were tested, the foreign acids containing 0.0005 per cent or less of lead; ash, 0.01 to 0.2 per cent; sulphuric acid, 0 to 0.25 per cent.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 28) report that in no case did the amount of lead present exceed 4 parts per million, while arsenic was usually absent.

Eldred, Frank R., points out that citric acid is required to contain 8.6 per cent of water of crystallization; when powdered it often contains less than this amount, sometimes as low as 6 per cent; this will cause trouble in the preparation of the official effervescing salts.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 890.

Rudolf, Robert Dawson, states that citric acid appears to have a slight retarding influence upon the coagulation of blood.—Am. J. M. Sc., 1910, v. 140, p. 815.

Weiss, H. (Wien. klin. Wchnschr., 1910, v. 23, No. 23) advises 5 or 6 gm. of citric acid a day for 3 days to retard coagulation, as in thrombosis.—J. Am. M. Ass., 1910, v. 55. p. 361.

ACID DIETHYLBARBITURIC.

The monograph for diethylmalonyl urea to be included in the Ph. Germ. V requires that the article have a melting point of 191° and be soluble in 17 parts of boiling water and in 170 parts of water at 15°.—Pharm. Zentralh., 1910, v. 51, p. 211.

Rabow, S., in discussing some of the objectionable features of new remedies, reports that the name for veronal originated with v. Mering, who on a railroad journey, while worrying over a short and euphonious name to be given diethylbarbituric acid reached the station "Verona" and immediately concluded that veronal could be applied to this remedy.—Therap. Monatsh., 1910, v. 24, p. 96.

Bachem, C., reports a study on the behavior of veronal and of veronal soda in the animal organism.—Arch. exper. Path. u. Pharmakol., 1910, v. 63, pp. 228–241.

von der Porten, Ernst, discusses the treatment of delirium tremens with veronal.—Therap. d. Gegenw., Berl., 1910, v. 51, pp. 270–271.

Schepelmann, Emil, reports on the use of veronal in sea-sickness and presents a number of references to current literature.—Therap. Monatsh., 1910, v. 24, pp. 681–691.

Wendt, E., reports experiments with veronal sodium: a comparison of its action with that of methylsulphonal and sulphonal.—*Ibid.*, pp. 599–604.

An unsigned article (Merck's Arch., 1910, v. 12, p. 223) states that about 30 cases of acute veronal poisoning have been described in the literature and quotes W. Rosendorff (Berl. klin. Woch., May 16, 1910), who reports 2 cases of veronal poisoning and outlines the symptoms observed.

Wilbert, M. I., calls attention to an abstract which points out that an alarming number of deaths from the use of veronal, either by accident or intention, have been reported within the past few weeks, and the matter is noted as being well deserving of the serious attention of the government.—Am. J. Pharm., 1910, v. 82, p. 129.

ACID FORMIC.

Kingzett and Woodcock discuss the production of formic acid by the atmospheric oxidation of turpentine.—J. Soc. Chem. Ind., 1910, v. 29, pp. 791–792.

Joseph, A. F., discusses the estimation of formic acid by the use of bromine water, silver nitrate and thiocyanate.—*Ibid.*, pp. 1189–1190.

Delehaye, H., reports observations on the determination of formic acid in the presence of acetic acid.—Ann. Falsif., 1910, v. 3, pp. 386–388.

ACIDUM GALLICUM.

Seidell, Atherton, reports experimental determinations on the solubility of gallic acid in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 1.16 gm., and 100 gm. of U. S. P. alcohol will dissolve 27.23 gm. of gallic acid.—Bull. No. 67, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, 47–49, 91.

Osborne, Oliver T., asserts that gallic acid does not have the local astringent action of tannic acid; therefore, there is no advantage in using gallic acid instead of tannic acid when local astringency is desired.—J. Am. M. Ass., v. 54, p. 51.

ACIDUM HYDRIODICUM DILUTUM.

Rippetoe, John R., thinks the limit of sulphuric acid in diluted hydriodic acid is too stringent, it should be made quantitative with a definite limitation.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1059.

Dunning, H. A. B., thinks there is no good reason why diluted hydriodic acid should be estimated by the sulphocyanate method while for dilute hydrobromic acid the "chromate" method is directed.—*Ibid.*, p. 969.

Brown, Linwood A., points out that diluted hydriodic acid is of a very unstable nature and should be a colorless, odorless liquid.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 133.

Randall, D. L., reports observations on the reaction between hydriodic acid and bromic acid in the presence of a large amount of hydrochloric acid.—J. Am. Chem. Soc., 1910, v. 32, pp. 644–646.

ACIDUM HYDROBROMICUM DILUTUM.

Dunning, H. A. B., points out that for diluted hydrobromic acid the U. S. P. directs the "chromate" method, while for hydriodic acid it directs the sulphocyanate method.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 969.

Larrouturou, J. (Bull. soc. pharm. Bordeaux, 49, 299–304) reports on the examination of an adulterated solution of hydrobromic acid purchased at a drug store.—Chem. Abstr., 1911, v. 5, p. 352.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 35) report that 2 samples of concentrated hydrobromic acid contained 35 and 42 per cent HBr respectively. Twelve samples of the diluted acid were practically free from sulphuric and phosphoric acids, and contained 10 to 11 per cent BHr.

Osborne, Oliver T., thinks diluted hydrobromic acid is not needed as it can cause all of the disagreeable symptoms that potassium bromide can cause.—J. Am. M. Ass., 1910, v. 54, p. 468.

ACIDUM HYDROCHLORICUM.

Reusch, K., reviews the progress made in the production of hydrochloric acid during 1909.—Chem. Ztg., 1910, v. 34, p. 263.

Dohme and Engelhardt state that the Ph. Hung. III requires for concentrated hydrochloric acid a specific gravity of 1.125, corresponding to about 25 per cent of hydrochloric acid.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1171.

Riedel's Berichte (1910, p. xxvii) points out that hydrochloric acid is not a stable compound and the specific gravity should be determined from time to time.

Goldbaum and Smith report on the electrolytic determination of chlorine in hydrochloric acid with the use of a silver anode and a mercury cathode.—J. Am. Chem. Soc., 1910, v. 32, pp. 1468–1471.

Dixon and Taylor describe and illustrate an apparatus for demonstrating the electrolysis of hydrochloric acid.—J. Chem. Soc., Lond., 1910, v. 97, pp. 374–377.

Chapman and MacMahon report on the interaction of hydrogen and chlorine, and the nature of photochemical inhibition.—*Ibid.*, pp. 845–851.

Lapworth and Partington present some observations on the influence of water on the availability of hydrogen chloride in alcoholic solutions.—*Ibid.*, pp. 19–34.

Sayre, L. E., reports on 3 samples of hydrochloric acid: all illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1096.

Palier, E., makes some further remarks concerning chronic diarrhœa, due to pyloric insufficiency, successfully treated with hydrochloric acid.—N. York M. J., 1910, v. 91, p. 231.

Adams, F. X., states that the specific indications of hydrochloric or muriatic acid are a pointed tongue, uniform redness, dry with a brown coating; thirsty, wanting to drink quite often.—Eclectic M. J., 1910, v. LXX, p. 70.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 67–68) calls attention to a contribution by Beebe and Rudisch who have used hydrochloric acid in pernicious anæmia with satisfactory results.

ACIDUM HYDROCYANICUM DILUTUM.

Raubenheimer, Otto, points out that diluted hydrocyanic acid, although now of 2 per cent HCN strength in most pharmacopœias, did contain 1 per cent in Japan, Mexico and France; 2.5 per cent in Belgium, and even 10 per cent in Spain and Portugal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1137.

Thome, E. R., asserts that diluted alcohol is not necessary in the formula for diluted hydriodic acid. The pharmacist is not prepared to distil or recover the alcohol and for the manufacturer, on account of its manufacture in large quantities and its corrosive nature, it is very cumbersome to employ alcohol. The use of a cracked ice bath is thoroughly efficient.—Practical Druggist, 1910, v. 28, p. 122.

Dunn, John A., comments on the U. S. P. method of assay for diluted hydrocyanic acid and outlines a method which he believes to be more satisfactory.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1118.

Ribaut, H., criticizes the useless and incommoding prolixity of the Ph. Fr. V method for the determination of the strength of hydrocyanic acid, and suggests a new version.—Bull. sc. pharmacol., 1910, v. 17, p. 143.

Rosenthaler, L., reports observations on the titrimetric estimation of hydrocyanic acid in and in the presence of benzaldehyde cyanhydrin.—Arch. d. Pharm., 1910, v. 248, pp. 529–533.

Bernegau, L. H., reports that diluted hydrocyanic acid is generally quite uniform. Of seven samples, examined, six ran from 1.192 to 2.06 per cent, while one sample tested 2.21 per cent.—Proc. Pennsylvania Pharm. Ass., 1910, p. 133.

Sayre, L. E., reports on 1 sample of diluted hydrocyanic acid: illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1096.

Brown, Linwood A., points out that diluted hydrocyanic acid is very unstable and is apt to decompose, forming ammonium formate, carbon dioxide, cyanic acid, and paracyanogen, a polymer of cyanogen, which deposits as a brownish precipitate. It should be kept in accordance with the directions of the U. S. P.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 133.

van Griffin, H. J., discusses the detection of hydrogen cyanide by means of Vortmann's nitroprusside reaction.—Pharm. Weekblad, 1910, v. 47, pp. 1043–1044.

Beryl and Delpy report observations on the quantitative colorimetric determination of small quantities of hydrocyanic acid by means of potassium hydrate and ferrous sulphate.—Ber. deutsch. chem. Gesellsch., 1910, v. 43, pp. 1430–1431. See also comments by Lockemann, *Ibid.*, pp. 2127–2128.

Waller, A. D., presents a new method for the quantitative estimation of hydrocyanic acid in the blood and tissues of animals postmortem.—J. Physiol., Lond., 1910, v. 40, pp. xlvii-lxxiv.

Venturoli and Finzi present a paper on the reactions of Schönbein and Van Deen and the chemico-toxicologic investigation of hydrocyanic acid.—Boll. chim. farm., 1910, v. 49, pp. 201–205.

Chapman, A. Chaston, discusses the colorimetric estimation of hydrogen cyanide and concludes that the test may occasionally be useful for the estimation of small quantities of hydrogen cyanide.—Analyst, London, 1910, v. 35, pp. 469–477.

Autenrieth, W., reports observations on the determination of hydrogen cyanide in an exhumed body.—Ber. d. pharm. Gesellsch., 1910, v. 20, pp. 432–446.

An editorial (Lancet, 1910, v. 179, p. 575) commenting on the relation of rate of elimination to maximum daily dose, remarks that hydrocyanic acid is eliminated so rapidly from the system that there would be but little danger in taking a maximum dose every hour.

Osborne, Oliver T., asserts that dilute hydrocyanic acid is so useless in small and so dangerous in large doses that it should be omitted from the Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 133. See also *Ibid.*, p. 290.

McClintic, Thomas B., in a study on disinfectants, outlines methods for using hydrocyanic acid as an insecticide.—Public Health Bulletin No. 42, 1910, Washington 1911, p. 26.

ACIDUM HYPOPHOSPHOROSUM.

Francis, J. M., reports that hypophosphorous acid will usually be found to contain considerable quantities of calcium sulphate. This not due to any attempt at sophistication, but rather to unavoidable manufacturing difficulties.—Proc. Pennsylvania Pharm. Ass., 1910, p. 138.

ACIDUM LACTICUM.

Seidell, Atherton, reports experimental observations on the solubility of lactic acid in aqueous alcohol solutions.—Bull. No. 67, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, p. 50.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 40) report that the specific gravity of the samples of lactic acid examined has fallen between 1.210 and 1.213, with a lactic acid content of 73 to 73.7 per cent.

Patch, Edgar L., has found quite a difference between hot and cold titration of lactic acid and presents a table showing the variations observed.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 741.

Ribaut, H., considers the iodoform reaction for lactic acid in the Ph. Fr. V insufficient, as it is not characteristic.—Bull. sc. pharmacol., 1910, v. 17, pp. 211–213.

Kühl, Hugo, comments on the use of Uffelmann's reaction for lactic acid.—Pharm. Ztg., 1910, v. 55, pp. 120–121.

v. Fürth and Charnass discuss the quantitative determination of lactic acid by the determination of the resultant aldehyde.—Biochem. Ztschr., 1910, v. 26, pp. 199–220.

The editor of the Therapeutics Column (J. Am. M. Ass., 1910, v. 54, p. 874) discusses lactic acid medication with some review of its history.

An editorial (Rev. Am. Farm. y Med., 1909–10, v. 14, p. 424) discusses the use of lactic acid in therapeutics.

Osborne, Oliver T., sees no reason for substituting lactic for hydrochloric acid. In fact he asserts that there seems to be no good therapeutic use for lactic acid and it could well be omitted from the Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 290.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 68–69) calls attention to contributions by Döderlein and others on the use of lactic acid, also to a paper by Faust who has investigated the pharmacological action of lactic acid to ascertain whether this acid can be used in place of other acids.

See also J. Am. M. Ass. and Index Medicus.

ACIDUM NITRICUM.

Frazier, Schuyler, discusses the manufacture of nitric acid and describes and figures some of the apparatus used.—Tr. Am. Inst. Chem. Eng., 1910, v. 3, pp. 287–294.

Haber, Fritz, discusses the production of nitric acid from atmospheric nitrogen, and calls attention to the annual consumption of Chile saltpeter. He points out that the export of sodium nitrate in Chile increased from 226,000 tons in 1880 to approximately 2,000,000 tons in 1909.—Ztschr. ang. Chem., 1910, v. 23, pp. 684–689.

An unsigned article (Sc. Am. Suppl., 1910, v. 70, pp. 233–234) describes and illustrates the Pauling process for the fixation of atmospheric nitrogen.

An editorial (Meyer Bros. Drug., 1910, v. 31, p. 130) comments on the fixation of atmospheric nitrogen and calls attention to some recent articles on the subject.

An abstract (Consular and Trade Reports) discusses the production of nitrates in Norway.—Oil, Paint and Drug Reporter, 1910, v. 77, April 18, p. 28F.

Reusch, K., reviews the progress made in the production of nitric acid during 1909.—Chem. Ztg., 1910, v. 34, p. 264.

For records of American and other patents see J. Soc. Chem. Ind., 1910, v. 29.

Goldschmidt, Sven, describes and illustrates an apparatus used for the determination of nitric acid in the presence of bromine, iodine and ammonia combinations.—Chem. Ztg., 1910, v. 34, p. 267.

Schmidt and Lumpp describe a new, very sensitive reaction for nitric acid and nitrates, using a sulphuric acid solution of di 9.10 monoxyphenanthryl amin.—Ber. deutsch. chem. Gesellsch., 1910, v. 43, pp. 794–797.

Tillmans, J., presents some observations on the detection and quantitative estimation of nitric acid in milk by means of diphenylamine-sulphuric acid.—Ztschr. Unters. Nahr. u. Genussm., 1910, v. 20, pp. 676–707.

Osborne, Oliver T., thinks that diluted nitric acid could well be omitted from the Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 290.

Monroe, A. Leight, quotes Simmons who states that he has found nitric acid to be indicated in severe shock to the spine accompanied by a profuse perspiration on the hands and feet.—Hahnemann. Month., 1910, v. 45, p. 72.

Fischer, C. E., asks how many of the homœopathic surgeons of today ever think of nitric acid or cicuta for wounds from splinters. He thinks it will repay us to study the older homœopathic authors again.—J. Am. Inst. Homœop., 1910, v. 2, p. 16.

Monroe, A. Leight, quotes Walter Joel Brown who recommends nitric acid in the treatment of acne, many small pimples on forehead just below the hair.—Hahnemann. Month., 1910, v. 45, p. 716.

Adams, F. X., points out indications for nitric acid are: leaden color of the tongue, red and slick, somewhat contracted. Not very thirsty. Strong odor from breath indicating an antiseptic.—Eclectic M. J., 1910, v. 70, p. 72.

ACIDUM NITROHYDROCHLORICUM.

Brown, Linwood A., points out that owing to the fact that time must be allowed to complete the reaction in making nitrohydrochloric acid, this acid should never be made extemporaneously.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 134.

Osborne, Oliver T., thinks it doubtful if nitrohydrochloric acid acts in any way differently from hydrochloric acid. This with the diluted acid could well be omitted from the next Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 290.

Barton, Wilfred M., thinks if nitrohydrochloric acid works as well in a foot-bath as it does internally, perhaps it would work as well in the bottle as out of it.—*Ibid.*, v. 55, p. 285.

ACIDUM NITROHYDROCHLORICUM DILUTUM.

Brown, Linwood A., points out that the nitrosyl chloride found in nitrohydrochloric acid, is decomposed into hydrochloric and nitrous acids by the water used in making diluted nitrohydrochloric acid.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 134.

Platt, A. A., reports on 6 samples of diluted nitrohydrochloric acid that he found to contain from 1.542 to 0.257 per cent of free chlorine. He also reports experiments to ascertain the effects of heat in hastening the preparation of this acid.—Am. J. Pharm., 1910, v. 82, p. 242.

Osborne, Oliver T., thinks that diluted nitrohydrochloric acid could well be omitted from the Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 290.

ACIDUM OLEICUM.

Seidell, Atherton, reports experimental determinations on the solubility of oleic acid in aqueous alcohol solutions. He finds that below about 50 weight per cent alcohol, the oleic acid is practically insoluble, between about 50 and 70 weight per cent the solubility apparently increases very gradually and then at about 75 per cent alcohol it goes up very abruptly to probable complete miscibility.—Bull. No. 67, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, pp. 51–55.

The Committee of Reference in Pharmacy asserts that good commercial oleic acid is sufficiently pure for official purposes. It should be described as "Oleic Acid of Commerce." The formula should be omitted. (Compare also Report, 1908, p. 5.)—Brit. & Col. Drug., Lond., 1910, v. 58, p. 29.

Hefter, G. (Seifenfabr., 30, 553–8, 605–6) presents a review of the methods and apparatus employed to date for the conversion of oleic acid into stearic acid.—Chem. Abstr., 1910, v. 4, p. 3149.

Boycott, A. E., discusses the action of oleic acid and its soaps on the blood, with tabulated results.—Brit. M. J., 1910, v. 2, p. 1420.

ACIDUM PHOSPHORICUM.

Eldred, Frank R., reports that some lots of phosphoric acid sold as containing 85 per cent, really contained as much as 89 per cent of phosphoric acid. When much stronger than 85 per cent it sometimes crystallizes and is rather troublesome to liquefy.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 890.

Dohme and Engelhardt state that in the Ph. Hung. III only a diluted acid of 20 per cent absolute phosphoric acid is official.—*Ibid.*, p. 1171.

Carpenter, F. B., presents some observations on the determination of phosphoric acid by the official volumetric method.—J. Ind. Eng. Chem., 1910, v. 2, pp. 157–158.

Wilkie, John M., outlines a method for the determination of phosphoric acid by means of standard silver nitrate.—J. Soc. Chem. Ind., 1910, v. 29, pp. 794–796.

Artmann, P., describes and discusses an iodometric method for the estimation of phosphoric acid.—Ztschr. anal. Chem., 1910, v. 49, pp. 1–25.

Wallis, T. E., discusses the assay of phosphoric acid and ammonium phosphate, and concludes that the official process for the assay of phosphoric acid might be improved by substituting magnesium oxide for the lead oxide at present used.—Year-Book of Pharmacy, 1910, pp. 405–408. Also Pharm. J., 1910, v. 31 (85), p. 137. For discussion see p. 176 and Collitt, Bernard, *Ibid.*, p. 382.

Bube, Kurt, reports a number of observations on the nature and properties of magnesium ammonium phosphate.—Ztschr. anal. Chem., 1910, v. 49, pp. 525–596.

Dumas, W. C., discusses the use of silver phosphate as a standard for phosphoric acid and reports a critical study of the gravimetric magnesia method for the estimation of phosphoric acid.—Chem. Eng., 1910, v. 12, pp. 185–190.

Denigès, G., contributes a note on some new and extremely sensitive reagents for phosphoric acid and phosphates, with their applications.—Bull. Soc. pharm., Bordeaux, 1910, v. 50, pp. 195–198.

Sayre, L. E., reports on 11 samples of diluted phosphoric acid: 8 passed; 3 illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1097.

Monroe, A. Leight, quotes Walter Joel Brown who recommends phosphoric acid in the treatment of acne in weakly persons, onanists and victims of spermatorrhœa.—Hahnemann. Month. 1910, v. 45, p. 716.

ACID PICRIC.

Stepanow, A., reports observations on the chemistry of picric acid and suggests that the yellow color of this acid is probably due to the absorption of atmospheric ammonia and the formation of picrates.—Ann. d. Chem., 1910, v. 373, pp. 219–226.

Motolese, Francesco, presents a contribution on the pharmacologic properties of picric acid.—Arch. farmacol. sper., 1910, v. 9, pp. 77–122.

Fancher, H. L., discusses the rational treatment of burns, and reports good results from the use of picric acid.—J. Am. M. Ass., 1910, v. 55, p. 27.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 71-72) reviews a number of communications which appear to indicate that picric acid is of value in affections of the eyes. It has great keratoplastic power, and appears to be a powerful agent in restoring epithelial and cutaneous tissues.

ACIDUM SALICYLICUM.

Wiley, H. W., reports that several years ago it was a common practice for various manufacturers to advertise the fact that their salicylic acid and sodium salicylate were made from oil of wintergreen. An investigation showed that a comparatively small amount of actual oil of wintergreen was produced in the United States, but it was very difficult to prove that any given sample of salicylic acid or sodium salicylicate was not made from oil of wintergreen. The investigation, however, has resulted in the manufacturers changing the style of their label so as to read ''salicylic acid natural,'' and ''sodium salicylate natural.''—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 440.

Menge, George A., in a study of melting point determinations reports on 5 samples of salicylic acid which were found to fuse completely at from 157.5° to 158.4°, corrected.—Bull. No. 70, Hyg. Lab.,

U. S. P. H. & M.-H. S., 1910, p. 85. See also Proc. Am. Pharm. Ass., 1910, v. 58, p. 1043.

Seidell, Atherton, reports experimental determinations on the solubility of salicylic acid in aqueous solutions of alcohol. He finds that at 25°, 100 gm. of water will dissolve 0.22 gm., and 100 gm. of U. S. P. alcohol will dissolve 46.85 gm. of salicylic acid.—Bull. No. 67, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, pp. 58–62, 91.

Schaefer, George L., asserts that salicylic acid requires 475 parts of water at 25° for solution.—Am. J. Pharm., 1910, v. 82, p. 221.

Puckner and Hilpert outline a method for the estimation of salicylic acid in the presence of organic matter.—Rep. Chem. Lab., A. M. Ass., 1910, v. 3, p. 45. See also p. 55.

Autenrieth and Beuttel discuss the gravimetric estimation of salicylic acid, in aqueous solution, as tribromphenolbrom.—Arch. d. Phar., 1910, v. 248, p. 120.

v. Fellenberg, Th., discusses the quantitative estimation of salicylic acid in confections, and presents a number of tables showing the results obtained.—Ztschr. Unters. Nahr. u. Genussm., 1910, v. 20, pp. 63–70.

Reichard, C., reports observations on the reactions of salicylic acid and discusses several new color reactions.—Pharm. Zentralh., 1910, v. 51, pp. 743–749. See also Schweiz. Wchnschr. Chem. u. Pharm., 1910, v. 48, pp. 721–722.

Einhorn and Bagh report experimental observations on the chemistry of several derivatives of salicylic acid.—Ber. deutsch. chem. Gesellsch., 1910, v. 43, pp. 322–336.

See also article by Einhorn and Seuffert.—*Ibid.*, pp. 2988–2995.

Larrouturou, J., contributes a paper on fluorescence in salicylic compounds.—Bull. Soc. pharm., Bordeaux, 1910, v. 50, pp. 202–216.

Sherman, H. C., calls attention to the priority of the work done by Arnold Backe in connection with the mistaking of maltol for salicylic acid.—J. Ind. & Eng. Chem., 1910, v. 2, p. 426. See also *Ibid.*, pp. 24-25, and Chem. News, 1910, v. 101, p. 89.

Pellet, H., discusses a source of error in the detection and estimation of salicylic acid, described by Arnold Backe as a substance formed by the combined action on starch of an enzyme and heat (above 150°) giving rise to a violet color with iron perchloride.—Ann. chim. analyt., 1910, v. 15, p. 302. See also *Ibid.*, p. 312.

van der Waerden, H., reviews some of the literature relating to the use of salicylic acid as a preservative and discusses the detection and quantitative determination.—Pharm. Weekblad, 1910, v. 47, pp. 882–894.

Kilmer, Frederick B., describes his method of assay for salicylic acid plaster.—Am. J. Pharm., 1910, v. 82, p. 114. Also J. Ind. & Eng. Chem., 1910, v. 2, p. 95.

Koldewijn, H. B., reviews some of the literature relating to the occurrence of salicylic acid in the milk of animals ingesting it.—Arch. d. Pharm., 1910, v. 248, p. 637.

Ghosh, B. N., reports observations on the actions and uses of salicylic acid and its preparations, with special reference to rheumatism.—Therap. Gaz., 1910, v. 34, pp. 535–538.

Jordan, Anson, in a study on the action of urinary antiseptics, reports observations on the antiseptic effect of salicylic acid. He concludes that the power of salicylic acid to increase the urinary acidity is very slight.—Biochem. J., 1910, v. 5, pp. 287–288.

Schumacher, George (Berl. Tier. Wchnschr., 1909, No. 20), reports some observations on the absorbing power of the skin of animals for salicylic acid and its sodium salts.—Am. Vet. Rev., 1910, v. 37, p. 82.

ACIDUM STEARICUM.

Seidell, Atherton, reports experimental determinations on the solubility of stearic acid in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 0.03+gm., and 100 gm. of U. S. P. alcohol will dissolve 4.33 gm. of stearic acid.—Bull. No. 67, Hyg. Lab., U. S., P. H. & M.-H. S., 1910, pp. 76–78, 91.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 16) report the figures obtained for 2 samples: melting point 57° and 56°; saponification value, 209.6 and 202.1; free acid, calculated as stearic acid, 106.1 and 106.2 per cent.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 72) report that the samples of commercial stearine tested had an acid value of 202 to 210; melting point, 53.5° to 57°.

ACIDUM SULPHURICUM.

Oddo, Giuseppe, discusses the use of sulphide ores for the production of sulphuric acid.—Chem. Ztg., 1910, v. 34, pp. 505–507; 514–515.

An unsigned article (Sc. Am. Suppl., 1910, v. 69, p. 266) calls attention to a new method for manufacturing sulphuric acid by heating gypsum or alabaster with a prepared silica.

Jurisch, Konrad W., discusses the natural theory of the lead chamber process and reviews much of the recent literature.—Chem. Ind., 1910, v. 33, pp. 137–143.

Reusch, K., reviews the progress made in the production of sulphuric acid during the past year.—Chem. Ztg., 1910, v. 34, p. 253.

Lunge, G., reviews the history of the contact method for the production of sulphuric acid as developed in the United States.—Ztschr. ang. Chem., 1910, v. 23, pp. 721–722.

See also Wentzki, O. *Ibid.*, pp. 1707–1715, Raschig, F., *Ibid.*, pp. 2241–2250, and Berl, E., *Ibid.*, pp. 2250–2253.

Lüttgen, Gustav, discusses some improvements in the methods for concentrating sulphuric acid.—Chem. Ztg., 1910, v. 34, pp. 23–25; see also Forster, R. C., *Ibid.*, p. 734, and Recke, *Ibid.*, pp. 173–175; 182–184.

Rabe, Hermann, reports studies on increasing the output of sulphuric acid chambers.—Ztschr. ang. Chem., 1910, v. 23, pp. 8–12.

Huybrechts discusses the analysis of sulphuric acid and the determination of sulphur in pyrites.—Bull. Soc. chim., Belg., 1910, v. 24, pp. 177–197.

v. Knorre, G., discusses the estimation of sulphuric acid with benzidin, particularly in the presence of chromium.—Chem. Ztg., 1910, v. 34, pp. 405–407; also Ztschr. anal. Chem., 1910, v. 49, pp. 461–484.

Noyes and Stewart report observations on the ionization relations of sulphuric acid.—J. Am. Chem. Soc., 1910, v. 32, pp. 1133–1162.

Dohme and Engelhardt state that the Ph. Hung. III concentrated sulphuric acid is a 95 per cent acid, possessing a specific gravity of 1.847 at 15°. This acid is slightly stronger than that of the U. S. P., which requires only 92.5 per cent of absolute acid.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1171.

Bachman, G., examined three samples of diluted sulphuric acid assaying 8.2, 9.6 and 13.8 per cent.—Proc. Minnesota Pharm. Ass., 1910, p. 63.

Wulling, Frederick J., reports that 3 samples of diluted sulphuric acid examined assayed respectively 8.2, 9.6 and 13.8 per cent.—Northwestern Druggist, 1910, v. 11, Sept., p. 25.

Osborne, Oliver T., thinks that it is doubtful if sulphuric acid, administered internally or added to baths, is of any special value.—J. Am. M. Ass., 1910, v. 54, p. 376.

For additional references on the chemistry and manufacture of sulphuric acid, see J. Ind. & Eng. Chem., Chem. Abstr. and J. Soc. Chem. Ind.

ACIDUM SULPHURICUM AROMATICUM.

Kremann, R., discusses the dynamics of the reaction between alcohol and sulphuric acid.—Monatsh. Chem., 1910, v. 31, pp. 245–274. See also pp. 1031–1033 for corrections.

Uyeda, Keiji (Therap. Monatsh., 24, 64–51) discusses the pharmacology and toxicology of ethylsulphuric acid.—Chem. Abstr., 1910, v. 4, p. 1762.

ACIDUM SULPHUROSUM.

LaWall, Charles H., asserts that as sulphurous acid is very prone to deteriorate rapidly, there should be a statement to the effect that the concentrated product should be assayed and diluted at the time of dispensing. This is preferable to the present official method of assay and immediate dilution, and would eliminate the necessity of advising its frequent assay as given in the text.—Am. J. Pharm., 1910, v. 82, p. 21.

Brown, Linwood A., points out that sulphurous acid is readily oxidized to sulphuric acid and loses part of its sulphur dioxide by volatilization. Light also affects it, reducing it to hydrogen sulphide.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 134.

Brown, Edward J., says that while one hesitates to suggest the advisability of adding a preservative to sulphurous acid, if such were to be decided on, glycerin is as suitable as any.—Pharm. J., 1910, v. 30 (84), p. 244.

Fischer and Delmarcel discuss the electrolytic oxidation of sulphurous acid in aqueous solution.—Bull. Soc. chim., Belg., 1910, v. 24, pp. 236–237.

van Waerden, H., discusses the use of sulphurous acid and of sulphites as preservatives and outlines methods for their detection and determination.—Pharm. Weekblad, 1910, v. 47, pp. 649–660.

Mathieu, L., discusses the determination of free and of combined sulphurous acid in wines.—Ann. Falsif., 1910, v. 3, pp. 410–417.

Kühn and Rühle discuss the detection of sulphurous acid in chopped meat.—Ztschr. Unters. Nahr. u. Genussm., 1910, v. 20, pp. 10–19.

Adams, F. X., points out that the indications for sulphurous acid are: tongue broad, red with slimy coating; moist, and odor of breath strong and fetid.—Eclectic M. J., 1910, v. 70, p. 72.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, p. 73) calls attention to the use by Talini of sulphurous acid in the treatment of pulmonary tuberculosis.

ACIDUM TANNICUM.

Nierenstein, M., presents an additional contribution on the chemistry and constitution of tannin.—Ber. deutsch. chem. Gesellsch., 1910, v. 43, pp. 628–634.

Iljin, Leo F., discusses the chemical composition and the size of the molecule of tannin.—J. prakt. Chem., 1910, v. 82, pp. 422–424. See also *Ibid.*, v. 81, pp. 327–328.

Woolsey, J. F., reports that much of the available tannic acid fails to meet the official requirements. An acid having more than 0.3 per cent ash, usually fails to come up to the standard.—Proc. Pennsylvania Pharm. Ass., 1910, p. 134.

Hill, Edward C., reports one sample of Merck's tannin which was found to be misbranded; marked "Technical", should have been "Not for Medicinal Use."—Bull. Colorado Bd. Health, 1910, v. 10, No. 2, p. 8.

Sayre, L. E., reports on 7 samples of tannic acid: all illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1098.

Mittelbach, Wm., reports that the use of glycerin in ointment of tannic acid is not necessary and it should be omitted.—*Ibid.*, p. 792.

Osborne, Oliver T., points out that tannic acid as such forms tannates in the stomach and high up in the intestine, and the astringency is then lost to the remainder of the intestine.—J. Am. M. Ass., 1910, v. 54, p. 51.

Hunt, Reid, reports that tannin protein derivatives are included in the Ph. Austr., Ph. Belg., Ph. Ndl., Ph. Germ., Ph. Hung., Ph. Mex. and Ph. Svec.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 772.

ACIDUM TARTARICUM.

Xrayser II, quoting the Oxford English Dictionary, notes that the first quotation for tartaric acid is dated 1810; until then the forms tartarous and tartareous were in use. Tartar, though we got it through Arabic, may be Egyptian; its first appearance in English is in Chaucer.—Chem. & Drug., 1910, v. 77, p. 549.

Seidell, Atherton, reports experimental determinations on the solubility of tartaric acid in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 137.5 gm., and 100 gm. of U. S. P. alcohol will dissolve 37.4 gm. of tartaric acid.—Bull. No. 67, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, pp. 79–81, 91.

Menge, George A., in a study of melting point determinations reports experiments with 6 samples of tartaric acid and concludes that this product should be placed in the class of compounds which decompose on melting.—Bull. No. 70, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, p. 86.

J. B. Lawes and Co., Ltd., London, and W. A. Davis, Bromley, Kent, in English patent 11,694, May 18, 1909, outline a method to avoid losses in the manufacture of tartaric acid from argols, tartars, etc.—J. Soc. Chem. Ind., 1910, v. 29, p. 488.

Kling, André, describes a novel method for the determination of tataric acid, in wines, as calcium racemate.—Ann. Falsif., 1910, v. 3, pp. 239–248. See also Ann. de chim. analyt., Par., 1910, v. 15, pp. 209–214; and Compt. rend. Acad. sc., 1910, v. 150, pp. 616–618.

Ordonneau, C., discusses the Goldemberg process for the estimation of total tartaric acid.—Bull. Soc. chim., 1910, v. 7, pp. 1034–1041.

Beys, C., presents a note on the estimation of tartaric acid.—Compt. rend. Acad. sc., 1910, v. 150, p. 1250.

Cowie, W. B., examined three samples according to the suggestions of the Committee of Reference and found only one came within the standard for impurities; one had a large proportion of lead, but was otherwise good and the third had an excess of lead and sulphate, and calcium equal to the maximum allowed.—Pharm. J., 1910, v. 30, (84) p. 6.

Rippetoe, John R., has examined a number of samples of tartaric acid, but recalls only one that was entirely free from sulphuric acid. He thinks it would be much more satisfactory to make this test quantitative, determining by comparison with a standard sulphuric acid solution. The amount present is small and may not affect the medicinal value, but causes sufficient difference of opinion to make trouble.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1059.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 73) report that in an examination of 90 samples of tartaric acids from various sources, the impurities have fallen within the following limits: arsenic always below one part per million; lead, 0.0005 to 0.002 per cent; sulphuric acid, 0 to 0.25 per cent; ash, 0.01 to 0.18 per cent.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 30) report as much as 19 parts of lead per million being found in one instance.

The Local Government Board (38th Ann. Rep. Part II) reports 112 samples of tartaric acid examined in 1908, of which 7 were not up to standard.—Pharm. J., 1910, v. 30, (84) p. 33.

The fifteenth annual report of the Local Government Board for Scotland shows that, out of 43 samples of tartaric acid examined, 16 were adulterated or of doubtful purity.—*Ibid.*, v. 31 (85), p. 65.

ACIDUM TRICHLORACETICUM.

Stollé, R., discusses the cleavage of trichloracetic acid into chloroform and carbon dioxide.—Ber. d. pharm. Gesellsch., 1910, v. 20, pp. 371–372.

Argue, J. A. (Pacific Dental Gazette) reports that in irritated conditions where the gums have a tendency to weep and bleed, he treats the gum margin with a 15 per cent solution of trichloracetic acid.—Dental Digest, 1910, v. 16, p. 200.

ACONITINA.

Menge, George A., in a study of melting point determinations, reports experiments on 6 samples of aconitine: 3 crystalline, white; 3 amorphous, with slight tinge of yellow. The product was found to have a wide range of values according to the manipulation applied. Heated at the rate of 3° per minute from about 165°, the corrected values obtained for the three crystalline samples approximated 188.6° to 189.6°. The point required by the Pharmacopœia is 195°.—Bull. No. 70, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, p. 86.

Ribaut, H., criticizes the Ph. Fr. V requirements as to the melting point of aconitine; he suggests an "instantaneous melting point of + 204° to 205°."—Bull. sc. pharmacol., 1910, v. 17, p. 141.

He also discusses the assay of aconitine by means of silicotungstic acid.—*Ibid.*, pp. 634–639.

Rosenthaler and Görner report on the use of aromatic nitro derivatives as precipitants for aconitine.—Ztschr. anal. Chem., 1910, v. 49, p. 343.

Scoville, W. L., reports that aconitine varies in physiological test from 1 in 450,000, to 1 in 650,000.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 741.

Short and Salisbury, investigating the action of cutaneous anæsthetics, find that even a 3 per cent solution of aconitine in absolute alcohol, a concentration far too dangerous for general use, was quite without result.—Brit. M. J., 1910, v. 1, p. 561.

Barton, Wilfred M., asserts that aconite or aconitine administered internally in therapeutic doses produces no benumbing effects.—J. Am. M. Ass., 1910, v. 55, p. 285.

Brady, William, states that aconitine is employed by some physicians who assert that it serves every purpose, but the two forms, crystalline and amorphous aconitine, are so variable, that safety lies in the use of the official tincture. Crystalline aconitine is said to be 200 times stronger than the amorphous.—N. York M. J., 1910, v. 91, p. 210.

ACONITUM.

Fichtenholz, A., quotes Tschirch as authority for the statement that, according to Pliny, this plant was named after the Black Sea port, *Acone*.—J. pharm. et chim., 1910, v. 2, p. ii.

Wilbert, M. I., points out that aconite does not appear in the Austrian Pharmacopœia, despite the fact that this drug was introduced into modern medicine in Austria in the eighteenth century.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1146.

Schneider, Albert, states that while the Pharmacopœia specifies *A. napellus* this is rarely found pure. It is generally mixed with the roots of *A. fisheri*, *A. japonicum*, *A. chinense*, *A. variegatum*, and other indefinitely defined species.—Merck's Rep., 1910, v. 19, p. 61.

LaWall and Bradshaw, report finding 3.4 and 4.7 per cent ash in aconite root.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 751.

Engelhardt, Hermann, reports that no difficulty was experienced in obtaining aconite root of the proper percentage—viz, 0.5 per cent ether soluble alkaloids.—*Ibid.*, p. 1256.

Clark, Albert H., reports that the samples of aconite examined by him were found to be above the requirements. The directions to percolate until 150 cc. of the percolate is obtained might well be changed to read "200 cc., or until exhausted."—Bull. Am. Pharm. Ass., 1910, v. 5, p. 123.

Lyons, A. B., reports a comparison of the requirements and methods of assay for aconite included in the various pharmacopœias.—Am. Druggist, N. Y., 1910, v. 56, p. 102.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 59) point out that the Ph. Germ. V has omitted the assay of aconite.

Lyons, A. B., thinks there seems to be no good reason for employing in the assay of aconite a process differing in any essential particular from that prescribed for the mydriatic drugs.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 827–828. See also *Ibid.*, p. 776.

Caesar & Loretz (Jahres-Ber., 1910, p. 121) recommend the Keller method of assay for belladonna as being applicable to aconite. They also call attention to the alkaloid content requirement for this drug included in several of the foreign pharmacopœias.

Hoover, G. W., points out that a review of the co-operative work done in connection with the assay of drugs shows a variation, by the pharmacopœial method, of 20 per cent of alkaloid in aconite root, and for the same drug by an aliquot part method 25 per cent of alkaloid, based on the amount present as 100 per cent.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 182. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Rippetoe, John R., thinks that in the assay of aconite it would be much more practicable to exhaust the drug with ether or a chloroform-ether mixture, either complete or using an aliquot portion.—Proc. Am. Phar. Ass., 1910, v. 58, p. 1059.

Scoville, W. L., discusses the official method of assay for aconite and thinks it could well be supplemented by the Squibb physiological test which will add much to its value.—*Ibid.*, p. 820.

Stevens, A. B., thinks that the physiological method for testing aconite is absolutely unreliable in the hands of different individuals.—*Ibid.*, p. 850.

Githens and Vanderkleed, in a discussion of physiologic standardization, present a comparison of such standardization with results obtained by chemical assay in connection with aconite root.—Am. J. Pharm., 1910, v. 82, p. 463. Also Proc. Am. Pharm. Ass., 1910, v. 58, p. 922.

Wood, H. C., jr., in a report on physiological assays, recommends the introduction of a physiological standard, which he outlines.—*Ibid.*, pp. 940–941.

Vanderkleed, Chas. E., reports 19 assays of aconite root—0.411 per cent the lowest, 0.680 per cent the highest; 12 above and 7 below standard.—Proc. Pennsylvania Pharm. Ass., 1910, p. 147.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 6) report 2 samples of autumn gathered English aconite root, assayed by the U. S. P. process, yielding 0.41 and 0.89 per cent respectively of an alkaloid answering the physiological test for aconitine.

Kebler, L. F., reports refusing entry for a number of consignments of spurious aconite.—Dental Cosmos, 1910, v. 52, p. 305.

Scoville, W. L., reports that his experiments show no deterioration in any of the preparations of aconite.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 879.

Githens and Vanderkleed present a proposed physiologic standard for aconite root, fluid extract of aconite root, tincture of aconite root and extract of aconite root.—*Ibid.*, p. 920.

An editorial (N. A. R. D. Notes, 1910–11, v. 11, p. 514) expresses the fear that some druggists are still dispensing 35 per cent strength upon prescriptions and otherwise.

Sayre, L. E., reports an examination of 57 samples of tincture of aconite, the strength of which was found to vary from below 2.5 to 50 per cent of the required strength.—Bull. Kansas Bd. Health, 1910, v. 6, p. 207.

Raubenheimer, Otto, points out that the tincture of aconite is 5 per cent in Great Britain; 10 per cent in most pharmacopœias and was 20 per cent in France and Hungary, and 35 per cent in the United States.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1137.

Havenhill, L. D., outlines a modified formula for making tincture of aconite.—*Ibid.*, p. 785.

Sayre, L. E., asserts that investigations of aconite preparations point to one thing definitely, namely, that tincture of aconite should be made from the drug itself, and not by a dilution of the fluid extract.—Bull. Kansas Bd. Health, 1910, v. 6, p. 206.

Anselmino, O., states that no assay of tincture of aconite is prescribed by the Ph. Germ. V as it has been found that in the case of this preparation its efficacy seems entirely independent of its alkaloidal content.—Chem. & Drug., 1910, v. 77, p. 892.

Knight, Henry G., reports the examination of 2 samples of tincture of aconite; 1 not passed.—Rep. Dairy, Food & Oil Com., Wyoming, 1910, p. 36.

Sayre, L. E., reports on 2 samples of tincture of aconite: both illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1095.

Thome, E. R., asserts that, in order to obtain a fluid extract of aconite of standard strength, the drug standard should be increased to 0.6 per cent, which is readily secured.—Practical Druggist, 1910, v. 28, p. 122.

Rippetoe, John R., makes a suggestion for improving the assay method for the fluid extract of aconite by filtering the acid solution through cotton and then washing with ether.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1061.

Sayre, L. E., reports on 2 samples of fluid extract of aconite root: both illegal.—*Ibid.*, p. 1095.

He states that investigations made in the drug laboratory appear to indicate that aconite preparations are not permanent, but he believes that this instability may be overcome.—Bull. Kansas Bd. Health, 1910, v. 6, p. 206.

Knott, John, presents an exhaustive paper on the physical, therapeutic and toxicological history of aconite, the *mater et caput* of known poisons, the modern (therapeutic and strictly scientific) knowledge of which has been tardily developed in three stages, respectively initiated by: Matthiolus, of Rome; Störck, of Vienna; and Geoghegan, of Dublin.—N. York M. J., 1910, v. 92, pp. 575–580, 622–626; 660–666.

Brady, William, states that aconite, in tincture, given by mouth shows its effect in 15 minutes, and it is completely eliminated within three hours. Doses, every three hours, are therefore indicated. He calls attention to the need of increasing the dose now that the tincture has been made weaker.—*Ibid.*, v. 91, p. 210.

Fisher, C. E., asserts that the frightful anxiety and apprehension of profound surgical shock are amenable to aconite and arsenicum.—J. Am. Inst. Homœop., 1910, v. 2, p. 17.

An unsigned abstract (Hom. Envoy) states that chill, fever, very restless, with anxiety and fear, are loud calls for aconite. Abnormal fear in any condition probably requires aconite.—*Ibid.*, p. 138.

Felter, H. W., asserts that aconite is equally a remedy for summer and winter disorders. None will question its value in the beginning of febrile and inflammatory affections, in the absence of marked organic diseases of the heart.—Nat. Eclec. M. Ass. Quart., 1910, v. 1, p. 204.

Monroe, A. Leight, quotes Kinyon who states that aconite is indicated in sudden suppression from cold (chill), fright or anger, coupled with congestion of all the deeper structures of the body. Acute ovaritis with severe pain.—Hahnemann. Month., 1910, v. 45, p. 233.

Yaeger, Wm. H., states that aconite is the first remedy to turn to in the case of a baby suffering with a marked inflammation of the bowels.—*Ibid.*, p. 368.

ADEPS.

The Committee of Reference in Pharmacy recommends that Halphen's sulphur test be substituted for Becchi's silver nitrate test, at present official. As lard has recently been adulterated with paraffin a test for this adulterant should be added. (Compare also Report, 1908, p. 7.)—Brit. & Col. Drug., Lond., 1910, v. 58, p. 29.

Lucas and Bird, in a proposed monograph for the Ph. Brit. recommend the adoption of saponification and iodine values to limit the free acid.—*Ibid.*, p. 315. See also Pharm. J., 1910, v. 31 (85), pp. 470–471.

Hartwich, C., thinks that the iodine number of 44 to 66, included in the Ph. Germ. V, permits a rather liberal variation. He calls attention to the limitations made in other pharmacopœias.—Apoth. Ztg., 1910, v. 25, p. 1034.

The Chemist and Druggist (1910, v. 77, p. 899) notes that a peculiar feature of the Ph. Germ. V monograph on adeps is that only a brief description is given, with the remark that the preparation must meet the requirements set forth in the special laws affecting this substance.

Thurston, Azor, discusses the testing of lard, and reports results obtained by him on a number of samples of commercial lard. The iodine number varied from 57.04 to 64.82 and the refractive index at 40° from 1.4593° to 1.4691°.—Merck's Rep., 1910, v. 19, pp. 64–65.

Bolton, E. R., thinks it advisable to omit altogether the test for cotton seed oil in lard, and suggests that it be regulated so as to give not over a certain intensity of color when carried out under strictly standard conditions in sealed tubes.—Pharm. J., 1910, v. 31 (85), p. 473.

Reichard, C., describes several color reactions for lard and butter.—Pharm. Zentralh., 1910, v. 51, p. 107.

Ewers, E., discusses the detection of palm oil in lard.—Ztschr. Unters. Nahr. u. Genussm., 1910, v. 19, pp. 529–543. See also Fendler, G., *Ibid.*, pp. 544–558, and Hanus and Thian, *Ibid.*, v. 20, pp. 745–749.

Gerrans, B. Henry, outlines a test for paraffin in lard which depends on the fact that paraffin is less soluble than lard in a mixture of equal volumes of chloroform and absolute alcohol.—Brit. Food J., 1910, v. 12, p. 4. See also Thompson and Hurst, Chem. News, 1910, v. 101, p. 109.

Hare, C. L., reports observations on some effects of feeds upon the properties of lard.—J. Ind. & Eng. Chem., 1910, v. 2, pp. 264–268.

Strunk calls attention to the changes in lard produced by heat.—Pharm. Zentralh., 1910, v. 51, p. 135.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 42) report that the observed range for iodine values (Hanus) has been 50.26 to 63.8. The lower figures are characteristic of high grade English lards, bladder lard, etc., and the higher figures typical of well-known American brands. The saponification value has varied between 191 and 196.

Table showing some of the analytical results reported for lard.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Hill, Edward C	1	1	Bull. Colorado Bd. Health, 1910, v. 10, No. 2, p. 6.
Potter, Hubert F	5	5	Rep. Conn. Dairy and Food Products, 1910, Hartford, 1911, p. 134.
Lynch, R. L	46	25	Rep. District of Columbia Health Off., 1910 (1911), p. 53.
Lythgoe, Hermann C	147	64	Rep. Massachusetts Bd. Health, 1910, p. 357.
Fifteenth annual report of the Local Government Board for Scotland.	54	2	Pharm. J., 1910, v. 31 (85), p. 65.

Evans, J., thinks that it is of importance that genuine lard be used in galenical preparations, and calls attention to the need for applying the pharmacopœial tests for purity.—Brit. & Col. Drug., Lond., 1910, v. 57, p. 132.

ADEPS BENZOINATUS.

Mittelbach, Wm., reports that benzoinated lard made by the formula of the 1880 Pharmacopœia is a more cleanly process than that of the present pharmacopœia and just as good.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 792.

van Nerom, G., describes a method for benzoinating lard.—Apoth. Ztg., 1910, v. 25, p. 16.

Shelley recommends the use of benzoic acid for the preparation of benzoated lard.—Brit. & Col. Drug., Lond., 1910, v. 58, p. 318.

Thum, John K., suggests making benzoinated lard by dissolving 1 per cent of benzoic acid in lard melted at a low heat.—Am. J. Pharm., 1910, v. 82, p. 201.

Koch, William J., asserts that lard and benzoated lard which are bought on the market today, even from reputable houses, are generally unfit for use in ointments. The fat turns rancid or acid and is irritating to the skin; although benzoated lard does not grow rancid, it is apt to become granular.—Am. Druggist, 1910, v. 56, p. 239.

ADEPS LANÆ.

Lucas and Bird point out that the melting point of wool-fat is constant at 40°. They outline a modified monograph for inclusion in the Ph. Brit.—Brit. & Col. Drug., Lond., 1910, v. 58, p. 313. Also Pharm. J., 1910, v. 31 (85), pp. 470, 471.

Dohme and Engelhardt state that the Ph. Hung. III directs that wool-fat should leave not more than 5 per cent of ash on incineration. The acid number should be less than 1.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1171–1172.

Gill and Forrest present a contribution on the hydrocarbons of the wool grease oleins.—J. Am. Chem. Soc., 1910, v. 32, pp. 1071–1073.

Evans Sons Lescher & Webb (Analytical Notes, 1910, pp. 40–41) report that in their experience the saponification and iodine values form a satisfactory check on the purity of wool-fats, and such tests might with advantage have been included in the new official specification proposed by Bird and Lucas. They present a table showing iodine value by Hanus', Wij's and Hübl's solutions.

ADEPS LANÆ HYDROSUS.

Mittelbach, Wm., thinks that adeps lanæ hydrosus should be dropped and the information that adeps lanæ has the property of being miscible with water, set out under its description.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 792.

ÆTHER.

Fichtenholz, A., quotes Tschirch as authority for the derivation of the word ether from the Persian or Arabic *attar* or *itr*, signifying an agreeable perfume.—J. pharm. et chim., 1910, v. 2, p. ii.

The Committee of Reference in Pharmacy recommends that the specific gravity of ether be given as 0.720. (Compare also Report, 1908, p. 7).—Brit. & Col. Drug., Lond., 1910, v. 58, p. 29. See also J. Am. M. Ass., 1910, v. 55, p. 789.

Dohme and Engelhardt state that the Ph. Hung. III directs that æther pro narcosi should have a specific gravity not higher than 0.720 at 25°, and should boil at exactly 35°.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1172. See also Lancet, 1910, v. 178, p. 961.

Baskerville, Charles, discusses the properties of ethyl ether, suitable for anæsthetic purposes.—Am. Druggist, 1910, v. 57, pp. 162–164.

Osaka, Y., in the Memoirs of the Kyoto College of Science discusses the solubility of ether in water.—Chem. & Drug., 1910, v. 77, p. 525.

Thum, John K., thinks that the U. S. P. requirements for ether are not sufficient to insure an ether of proper strength and purity for anæsthesia.—Am. J. Pharm., 1910, v. 82, pp. 100, 202.

Wolff, Hans, outlines a method for the estimation of ether and benzol in alcohol.—Chem. Ztg., 1910, v. 34, p. 1193.

Walton, L. L., reports the finding of hydrogen dioxide in ether.—Am. Druggist, 1910, v. 57, pp. 69–70. Also Proc. Pennsylvania Pharm. Ass., 1910, pp. 218–220.

An editorial (Drug Topics, 1910, v. 25, p. 229) comments on the paper by Walton, and points out that some years ago similar observations were made in Germany and in England.

An editorial (Nat. Druggist, 1910, v. 40, p. 206) calls attention to a new phase of the liquor question, ether drinking.

Calwell, William, presents a brief paper, with statistical tables and map, of ether drinking in Ulster.—Brit. M. J., 1910, v. 2, pp. 387–389.

Mathews, Albert P., presents a note on the action of ether on an anaërobic animal tissue.—J. Pharmacol. & Exper. Therap., 1910–11, v. 2, pp. 231–238.

Graham, Evarts A., discusses the effect of ether on certain processes of immunity.—J. Am. M. Ass., 1910, v. 54, p. 1043.

Cock, F. William, presents a note on the first operation under ether in Europe.—Lancet, 1910, v. 179, pp. 1242, 1447.

Engstad, J. E., presents a note on ether: an antidote of cocaine and stovaine poisoning.—J. Am. M. Ass., 1910, v. 54, p. 964.

Bogan, Joseph B., contributes a paper on the practical administration of ether.—N. York M. J., 1910, v. 92, p. 612.

McMechan, F. Hoeffer, describes and illustrates several new forms of apparatus for the administration of anæsthetics.—Boston M. & S. J., 1910, v. 162, pp. 273–276.

Morel, L., reports observations on the production of anæsthesia by rectal injections of ether.—Arch. exper. Path. u. Pharmakol., 1910, v. 62, pp. 429–430.

Cunningham, John H., reports a death following rectal anæsthesia in a patient with amœbic dysentery.—Boston M. & S. J., 1910, v. 162, p. 387.

Tyrode, Maurice Vejux, discusses intravenous ether and chloroform narcosis with a review of the pharmacologic action of ether.—*Ibid.*, v. 163, p. 19.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 78–81) reviews the communications of various writers on intravenous ether anæsthesia as introduced by Burkhardt.

A number of references on anæsthesia, the administration of ether and the report of accidents following its use will be found in the J. Am. M. Ass. and Index Medicus.

ÆTHER ACETICUS.

The Committee of Reference in Pharmacy outlines several tests to be added to the Ph. Brit. monograph for acetic ether. (Compare also Report, 1908, p. 8.)—Brit. & Col. Drug., Lond., 1910, v. 58, p. 29.

Dohme and Engelhardt state that in the Ph. Hung. III the boiling point of acetic ether is limited from 74° to 76°, therefore not having the wide range as given in the correction of the U. S. P., *i. e.*, 72 to 77°.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1172.

Seidell, Atherton, reports experimental determinations on the solubility of ethyl acetate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 50.0 gm. of ethyl acetate.—Bull. No. 67, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, pp. 13–15, 91.

Eldred, Frank R., reports that eleven lots of acetic ether have been found to vary from 89 per cent to 96 per cent. Care should be taken to use acetic ether which has been washed with water, for saturating the water to be used in this determination, otherwise low results will be obtained.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 890.

Woolsey, J. F., reports that much acetic ether is sold which will show less than 90 per cent ethyl acetate. Improvements in the U. S. P. tests are desirable.—Proc. Pennsylvania Pharm. Ass., 1910, p. 134.

Riedel's Berichte (1910, p. xxvii) points out that an acetic ether having a specific gravity of 0.900 to 0.904, as required by the Ph. Germ. IV, does not boil within the official limits.

Cushny, Arthur, in a discussion on the exhalation of drugs by the lungs, finds that ethyl acetate is exhaled only in traces; this may be due to its rapid disappearance from the blood, for in the second experiment the blood drawn immediately after the injection contained comparatively little of the ester.—J. Physiol., Lond., 1910, v. 40, p. 22.

ÆTHYLIS CARBAMAS.

Mittelbach, Wm., states that ethyl carbamate seems to be of little use and very unreliable, it should therefore be dismissed.—Proc. Missouri Pharm. Ass., 1910, p. 98.

Saradschian, Alexander, reports a number of experiments with urethane and hydrated chloral to determine the mutual pharmacologic influence of two narcotics of the fatty series.—Ztschr. exper. Path. u. Therap., 1910, v. 8, pp. 536–544.

ÆTHYLIS CHLORIDUM.

Riedel's Berichte (1910, p. xxx) presents a monograph giving the properties and tests for ethyl chloride.

An unsigned article (Nat. Druggist, 1910, v. 40, p. 443) describes and illustrates an improved container for ethyl chloride.

Franz and Ruediger, in a study of sensory changes in the skin following the application of local anæsthetics and other agents, find that ethyl chloride is not only an analgesic but an anæsthetic, the former effect relatively persistent, the latter of short duration.—Am. J. Physiol., 1910–1911, v. 27, p. 59.

Koenig, C. J., discusses the use of ethyl chloride in the ear.—Rev. Am. Farm. y Med., 1909–10, v. 14, pp. 416–417.

Parsons, P. H., calls attention to a simple apparatus (figured) for the production of ethyl chloride anæsthesia.—Brit. M. J., 1910, v. 1, p. 1242.

Wood, Horatio C., Jr., presents a note on the comparative danger of ethyl chloride as an anæsthetic.—J. Am. M. Ass., 1910, v. 55, p. 2229.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 81–82) calls attention to a contribution by Miller who discusses the advantages of ethyl chloride in general anæsthesia.

A number of references on the chemistry, pharmacology and uses of ethyl chloride will be found in the J. Am. M. Ass. and Index Medicus.

AGAR AGAR.

An unsigned article (Rev. Am. Farm. y Med., 1909–10, v. 14, p. 435) discusses the history and pharmacology of agar agar.

Caesar & Loretz (Jahres-Ber., 1910, p. 7) point out that the rapidly increasing use of agar agar for medicinal and other purposes has brought about a scarcity of the drug and the light-colored article is difficult to obtain at the present time.

Gehe & Co. (Handels-Bericht, 1910, p. 45) point out that because of the wide-spread use and the increasing consumption of agar agar this article is being adulterated with inferior substances, more particularly agar agar in powdered form is frequently found to be adulterated. The ash content of good agar agar should not vary much from 2.6 to 3.5 per cent and should not exceed 4 per cent. The substance should be free from starch and free from oxydase to insure the absence of starch containing material or gum arabic.

Morse, John Lovett, concludes that agar agar is useful in children, as in adults, in the treatment of the type of constipation associated with small, dry stools. It is harmless and in many instances gives most satisfactory results.—J. Am. M. Ass., 1910, v. 55, p. 934.

An editorial (Therap. Gaz., 1910, v. 34, p. 474) discusses the use of agar agar in constipation.

ALCOHOL.

Oldberg, Oscar, thinks that every title which can without impropriety be treated as indeclinable should be so treated, and commends the rule formerly followed in the American Pharmacopœia under which technical titles ending in al, ol, or yl were treated as indeclinable words.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 760.

Haas, Bruno, reviews some of the various definitions applied to wine distillate, wine spirit and brandy.—Pharm. Post, 1910, v. 43, pp. 817–818.

Mittelbach, Wm., thinks that diluted alcohol should be dropped from the Pharmacopœia.—Proc. Missouri Pharm. Ass., 1910, p. 98.

Dohme and Engelhardt state that the Ph. Hung. III concentrated spirit should contain 94.1 to 96 per cent of absolute alcohol by volume.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1191.

Raubenheimer, Otto, states that Continental alcohol instead of being 95 per cent strong is only 90 per cent, and diluted alcohol 68 to 70 per cent.—*Ibid.*, p. 1138.

Wilbert, M. I., presents a table showing the recognition accorded to wine and distilled liquors in the several national pharmacopœias.—Am. J. Pharm., 1910, v. 82, p. 449. See this Bulletin under Vina, p. —.

Meldola, R., discusses the first synthesis of ethyl alcohol.—J. Soc. Chem. Ind., 1910, v. 29, pp. 737–740.

Remy, Eduard, reviews the development of the alcoholic fermentation theory up to the present time.—Apoth. Ztg., 1910, v. 25, p. 228.

Wiley, H. W., and others, discuss the production and the sources of alcohol. Also describe with illustrations the several forms of stills that are used in its production.—Bull. 130, Bur. Chem., U. S. Dept. Agric., 1910, pp. 166.

Frank-Kamenetzky, A., reports observations on the control of alcohol production by means of the saccharimeter and the immersion refractometer.—Ztschr. ang. Chem., 1910, v. 23, pp. 293–301.

Gruber and Rüdiger present a review of the progress of the alcohol industry during the years 1908 and 1909.—Chem. Ind., 1910, v. 33, pp. 10–18, 39–48, 69–76, 710–719, 745–753, 782–790.

An editorial (Pharm. J., 1910, v. 31 (85), p. 200) discusses the manufacture of ethyl alcohol from sawdust, and refers to the work of Borde published in the Manufacturer's Record and summarized in the Chemical News.

Ruttan, R. F., discusses the production of alcohol from wood waste.—Sc. Am. Suppl., 1910, v. 69, pp. 242–243.

Doby, G., discusses the production of sugar, cellulose and alcohol from corn.—Chem. Ztg., 1910, v. 34, pp. 1330–1331.

Buchner and Meisenheimer discuss the chemical processes in alcoholic fermentation and report a series of experiments the results of which are presented in the form of tables.—Ber. deutsch. chem. Gesellsch., 1910, v. 43, pp. 1773–1795.

Ashdown and Hewitt report experiments to determine the by-products of alcoholic fermentation.—J. Chem. Soc., Lond., 1910, v. 97, pp. 1636–1648.

Bischoff, B., and others discuss the aldehyde content of the commercial alcohol now marketed in Germany.—Apoth. Ztg., 1910, v. 25, pp. 436, 466, 476, 477.

Hilton, S. L., discusses the relations between commercial and U. S. P. alcohol and presents a table showing the composition of fifteen samples of alcohol. He recommends a change in the form of package so that retail druggists could be sure of getting alcohol free from the contaminations so frequently found.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 958–961.

The American Pharmaceutical Association suggests that the Internal Revenue Department permit the use of such forms of distiller's package for alcohol for medicinal use as will obviate the objections to the present common barrel package.—*Ibid.*, p. 547.

Pearson, W. A., reports that alcohol cannot usually be obtained without traces of aldehydes, and without leaving some residue on evaporation.—Proc. Pennsylvania Pharm. Ass., 1910, p. 134.

Kline, C. Mahlon, points out that alcohol as usually supplied by distillers is not of U. S. P. quality, and suggests that analytical chemists or those requiring alcohol for a special purpose redistill it or have it redistilled for them.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 632.

Hallberg, C. S. N., states that the distiller sends three kinds of alcohol out from the run, heads and tails, known as alcohol, and a middle run known as cologne spirits. U. S. P. alcohol should be cologne spirits, or middle run.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 962.

Sayre, L. E., reports that most of the distillers think it perfectly practicable to put out a 96 and even higher percentage of alcohol.—*Ibid.*, p. 596.

Brown, Linwood A., asserts that commercial alcohol is seldom of the purity and strength necessary for pharmaceutical use, averaging as a rule, from 88 to 92 per cent, and containing large amounts of aldehydes, fusel oil constituents, coloring matter, and tannin.—Bull. 150, Ky. Agric. Exper. Sta., 1910, p. 147.

Caspari, Charles Jr., asserts that retail druggists can obtain the pharmacopœial standard alcohol if they insist on getting it.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 145.

Lythgoe, Hermann C., reports the examination of 78 samples of alcohol; 8 adulterated. Seven of these were so reported on account of their being low in alcohol; the percentage of alcohol varied from 72 per cent to 87 per cent. One sample was found to be denatured alcohol.—Rep. Mass. Bd. Health, 1910, p. 362.

Sayre, L. E., reports on 50 samples of alcohol: 38 passed; 12 illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1095.

Ronnet, Léon, presents some observations on the determination of aldehydes in alcohol.—Ann. Falsif., 1910, v. 3, pp. 205–206.

Tolman, L. M., presents the report of the committee on standardization of alcohol tables, and recommends the provisional adoption of the table of the Bureau of Standards as published in Circular 52 (pp. 22–29) of the Bureau of Chemistry.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., pp. 48–49. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137).

Clark, A. H., thinks that alcohol tables in harmony with those of the Internal Revenue Department should be featured in the coming revision of the U. S. P.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 166.

Warren, W. H., describes and illustrates an apparatus for the preparation of absolute alcohol.—J. Am. Chem. Soc., 1910, v. 32, pp. 698–702.

Engelhardt and Jones discuss the identification of methyl alcohol in ethyl alcohol and review the several methods for the detection of methyl alcohol that have appeared since the publication of the U. S. P. VIII.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1057–1058.

LaWall, Charles H., asserts that the present official method of testing for wood alcohol has been alleged to be unreliable. It would be advantageous, therefore, to substitute some authoritative method.—Am. J. Pharm., 1910, v. 82, p. 21.

Denigès, Georges, contributes a note on the detection of ethyl alcohol in the presence of methyl alcohol.—Bull. Soc. chim., France, 1910, v. 7, p. 951. See also Bull. Soc. pharm., Bordeaux, 1910, v. 50, pp. 145–148, 417–419.

Wolff, Hans, outlines a method for the estimation of ether and benzol in alcohol.—Chem. Ztg., 1910, v. 34, p. 1193.

de Stoecklin, E., outlines a new method for the detection of traces of alcohol by the formation of aldehyde and the detection of this by rosanilin disulphite.—Apoth. Ztg., 1910, v. 25, p. 114.

Davis, James E., asserts that it is proposed to change the pure food and drugs act by making it unlawful to use wood or methyl alcohol in the compounding of any drug or preparation intended for medicinal purposes.—Proc. Michigan Pharm. Ass., 1910, p. 66.

The revised list of alcoholic medicinal preparations for the sale of which a special tax is required is reprinted.—Drug Topics, 1910, v. 25, pp. 216–217, also Am. Druggist, 1910, v. 57, p. 47, and other drug journals.

Leubner, Bernard O., discusses tests and methods for accurately determining the percentage of grain alcohol in pharmaceutical and alcoholic preparations generally.—Merck's Rep., 1910, v. 19, pp. 125–126.

The American Pharmaceutical Association approves the recommendation: "That with each formula for a preparation containing alcohol, the range of alcohol content of the product be given."—Proc. Am. Pharm. Ass., 1910, v. 58, p. 540.

A book review (J. Am. M. Ass., 1910, v. 55, p. 523) calls attention to a book on alcohol a dangerous and unnecessary medicine recently published by Martha M. Allen, Superintendent of the Department of Medical Temperance for the National Woman's Christian Temperance Union.

Wilson, G. B., presents some interesting figures as to the consumption of alcoholic beverages in the United Kingdom in 1909.—Lancet, 1910, v. 178, p. 1111.

Battelli and Stern contribute a note on the production of aldehyde in the oxidation of alcohol by the alcoholase of animal tissues.—Compt. rend. Soc. Biol., 1910, v. 68, p. 5.

Crothers, T. D., presents a paper on alcohol as a poison.—J. Am. M. Ass., 1910, v. 54, pp. 590–593.

Salant and Hinkel report observations on the influence of alcohol on the composition of urine.—J. Pharm. & Exper. Therap., 1909–10, v. 1, pp. 493–517.

Blakely, David N., reports a case of alcoholic cirrhosis in a boy of four years.—Boston M. & S. J., 1910, v. 162, p. 245.

An editorial (J. Am. M. Ass., 1910, v. 54, p. 1063) discusses the effects of alcohol and changes in temperature on antibody formation with numerous references to current literature.

Harris, Wilfred, discusses trigeminal neuralgia and its treatment by alcohol injection.—Brit. M. J., 1910, v. 1, p. 1404. See also p. 1578.

Osborne, O. T. (Yale M. J., January, 1910), discusses the therapeutic use of alcohol.—J. Am. M. Ass., 1910, v. 54, p. 742.

Waugh is reported as asserting that other drugs can be relied upon to do the work done by alcohol.—Critic and Guide, New York, 1910, v. 13, p. 176.

The editor of the Therapeutics Column (J. Am. M. Ass., 1910, v. 54, p. 794) discusses the drug treatment of alcohol habitués, with special reference to the method published by Alexander Lambert.

Hannell, M. H., asserts that ammonium chloride, one-half to one drachm, dissolved in water and given at one dose, followed by a copious draught of water, will not only counteract the effect of the alcohol and sober up the patient quickly, but will prevent delirium which many times follows these alcoholic debauches, and also overcome the craving for alcoholic stimulants.—Eclectic M. J., 1910, v. LXX, pp. 15–16.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 84–86) reviews the literature relating to the uses of alcohol.

A number of references on alcoholism and the economic problems involved in the alcohol question will be found in Hyg. Rundschau, 1910, v. 20.

For additional references on the chemistry, pharmacology and uses of alcohol see Chem. Abstr., Zentrlbl. Biochem. u. Biophysik., J. Am. M. Ass. and Index Medicus.

ALCOHOL, DENATURED.

The Consular and Trade Reports (Sept. 12, 1910, p. 771) states that the production of commercial denatured alcohol during the fiscal year ended June 30, 1910, aggregated 6,078,988 gallons, an increase of 2,522,569 gallons over the previous year.

See also editorial (Oil, Paint and Drug Reporter, 1910, v. 78, August 29, pp. 7–8).

Wiley, H. W., and others discuss the manufacture of denatured alcohol and describe the operations of an experimental still at Washington. Fermentation and distillation are discussed at some length. The several subjects are liberally illustrated.—Bull. No. 130, Bur. Chem., U. S. Dept. Agric., 1910, pp. 166.

See also a news note (Oil, Paint and Drug Reporter, 1910, v. 78, November 14, p. 55).

A news note (Oil, Paint and Drug Reporter, 1910, v. 77, January 3, p. 40) calls attention to the proposed production of denatured alcohol from waste molasses.

An editorial (N. A. R. D. Notes, 1910–11, v. 11, p. 867) calls renewed attention to the fact that the use of denatured alcohol in medicines is prohibited.

ALCOHOL, METHYL.

An editorial (Bull. Pharm., 1910, v. 24, p. 488) discusses the merits of the various designations wood spirit, wood naphtha and methyl hydroxide.

A news note (Oil, Paint and Drug Reporter, 1910, v. 78, December 19, p. 8) discusses the production of wood alcohol, and presents a table showing the amount and the value of wood alcohol produced from hard wood and soft wood during the year 1909.

Engelhardt and Jones discuss the identification of methyl alcohol in ethyl alcohol, and review the several methods for the detection of methyl alcohol which have appeared since the publication of the U. S. P. VIII.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1057–1058.

Leubner, Bernard O., discusses the detection of acetone in methyl alcohol.—Merck's Rep. 1910, v. 19, pp. 186–188. See also pp. 92–95.

Denigès, G., presents a note on an easy, sensitive and rapid method for the detection of methyl alcohol in general and particularly in the presence of ethyl alcohol.—Compt. rend. Acad. sc. 1910, v. 150, pp. 832–834.

Fendler and Mannich discuss several methods for the detection of methyl alcohol.—Apoth. Ztg. 1910, v. 25, p. 369.

See also Bukowski, A.—Pharm. Post, 1910, v. 43, pp. 129–132.

Lythgoe, Hermann C., reports the examination of 6 samples of methyl alcohol, 3 of which, classed as adulterated, were sold without being properly labeled.—Rep. Massachusetts Bd. Health, 1910, p. 363.

Breves, Rudolph, asserts that wood alcohol and denatured alcohol are used extensively in the arts and by unscrupulous dealers, probably even in pharmacopœial preparations. Tests to detect their presence ought to be given.—Practical Druggist, 1910, v. 28, p. 39.

Eliel, Leo, thinks it is certainly proper to legally restrict the use of methyl alcohol to chemical and mechanical purposes only.—Proc. Pennsylvania Pharm. Ass. 1910, p. 364.

Natanson, A. (Deut. Med. Wchnschr. 1909, v. 35, No. 45), states that 80 cases of blindness or death from wood alcohol are known in Russia, and he reports another case of blindness.—J. Am. M. Ass. 1910, v. 54, p. 87.

An unsigned note (Lancet, 1910, v. 179, p. 1213) states that in Russia, owing to the heavy excise on alcohol, many pharmaceutical products are made up with wood spirit, which is very injurious to health.

Müller, R., discusses the toxic action of methyl alcohol.—Ztschr. ang. Chem. 1910, v. 23, pp. 351–355. See also editorial, J. Am. M. Ass. 1910, v. 55, p. 700.

Arends, G., suggests the use of methyl alcohol for pharmaceutical purposes to obviate the high revenue on ethyl alcohol. He enumerates a number of preparations in which he thinks methyl alcohol could be used.—Pharm. Ztg. 1910, v. 55, p. 489.

Kobert, R., points out the danger of using methyl alcohol in pharmaceutical preparations and asserts that absolutely pure methyl alcohol is known to cause severe toxic phenomena.—*Ibid.*, p. 518. See also Apoth. Ztg. 1910, v. 25, pp. 1053–1054.

An editorial (J. Am. M. Ass. 1910, v. 54, p. 1380), commenting on the prestige given a substance by its inclusion in the Pharmacopœia, states that those who followed the early prosecutions against the users of wood alcohol in medicinal products will remember the impression made on both jury and judge by the fact that wood alcohol was (through the efforts of a few misinformed physicians and pharmacists, and against the protests of some of the best men in both professions) included for a brief period of 3 years, in the sixties, in the British Pharmacopœia.

ALOE.

Woolsey, J. F., thinks the Pharmacopœia should give limits of solubilities in alcohol and water for guidance in determining the quality of aloės and possibly a method for determining the aloin content.—Proc. Pennsylvania Pharm. Ass. 1910, p. 134.

Davis, James E., reports that the solubility tests of the U. S. P. for aloes exclude the great majority of samples. These tests evidently need revision.—Proc. Michigan Pharm. Ass. 1910, p. 62.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 5) report that 5 samples of Socotrine aloes have been examined during the year, and in no instance has the Ph. Brit. standard for solubility in cold water been reached, the actual figures ranging from 31.2 to 41.1 per cent, with an average value of 36.8 per cent.

LaWall and Bradshaw report finding 0.1 per cent ash in Socotrine aloes.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Eldred, Frank R., reports that twenty-four lots of crude aloes yielded from 0.5 to 9.7 per cent of ash, the yield of ash was in most cases between 1 and 4 per cent.—*Ibid.* p. 890.

Hartwich, C., thinks that the ash limit of the Ph. Germ. V (1.5 per cent) can readily be attained. He regrets that the Pharmacopœia did not include a test for the presence of oxymethylanthraquinone.—Apoth. Ztg. 1910, v. 25, p. 1034.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 11) point out that the Ph. Germ. V continues to confine the official aloes to the glossy African variety. For the production of powder, the drug is to be dried over lime.

Dohme and Engelhardt state that the Ph. Hung. III includes the species of aloes given in the U. S. P.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1172.

Gane, E. H., asserts that extractum aloes is replaced almost wholly nowadays by aloin.—Drug Topics, 1910, v. 25, p. 228.

Havenhill, L. D., outlines modified formulas for tincture of aloes and tincture of aloes and myrrh.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 785.

Dunning, H. A. B., thinks that tincture of aloes can readily be made by percolation.—Am. J. Pharm. 1910, v. 82, p. 196.

Dohme and Engelhardt state that the Ph. Hung. III directs that the tincture of aloes should contain 9 per cent of extractive matter.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1192.

Hommell, Philemon E., stated that tincture of aloes is rarely prescribed and should be eliminated.—Merck's Rep. 1910, v. 19, p. 122.

Osborne, Oliver T., thinks that the number of preparations of aloes and rhubarb should certainly be reduced. The tincture of aloes and myrrh, the pills of aloes and myrrh, the pills of aloes and mastiche, and the pills of aloes and iron could well be omitted.—J. Am. M. Ass. 1910, v. 54, p. 291.

v. Magyary-Kossa, Julius, discusses the influence of aloe and the anthraquinone derivatives on body temperature.—Arch. internat. pharmacodyn. et thérap. 1910, v. 20, pp. 157–163.

Brady, William, notes that aloes acts in 10 to 12 hours. It is suitable for use at bed time.—N. York M. J. 1910, v. 91, p. 212.

Dewey, W. A. (Med. Century) notes that persons annoyed by being always compelled to hurry to stool after eating may find relief in a few doses of aloes.—J. Am. Inst. Homœop. 1910, v. 2, p. 420.

Butler, George F., asserts that while one or two grains of Socotrine aloes is sufficient to bring about a free evacuation of the bowels, the same effect can scarcely be secured by a dose of Arabian or Mocha aloes of five times this amount.—N. York M. J. 1910, v. 92, p. 952.

ALOINUM.

Léger, E., discusses the chemical constitution of various aloins.—Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 132–134. Also Pharm. Post, 1910, v. 43, pp. 722–723 and Pharm. J. 1910, v. 31 (85), p. 367.

He also contributes an article on aloinose or aloin sugar.—Bull. Soc. chim. France, 1910, v. 7, pp. 479–485, 800–807. See also Compt. rend. Acad. sc. 1910, v. 150, pp. 983–986, 1695–1697, and J. pharm. et chim. 1910, v. 1, pp. 528–532, v. 2, pp. 145–149.

Mossler, Gustav, discusses the physical and chemical characteristics of aloin and enumerates a number of tests for identity and purity. He states that 1 part of aloin in 5 parts by weight of hot water yield a nearly clear neutral solution; 0.5 gm. of the substance should leave no weighable residue on incineration.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, p. 231.

An unsigned article (Western Druggist, 1910, v. 32, p. 474) discusses the characters and tests of aloin.

Bernegau, L. H., reports that of 14 samples of aloin examined, all left a weighable amount of residue or ash, ranging from 0.18 to 0.75 per cent. It is suggested that the U. S. P. requirements read, "when ignited it should leave not more than 0.3 per cent of residue."—Proc. Pennsylvania Pharm. Ass. 1910, p. 134.

LaWall and Bradshaw report finding 0.5 per cent ash in aloin.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Sayre, L. E., reports on 11 samples of aloin: 9 passed; 2 illegal.—*Ibid.* p. 1095.

ALTHÆA.

Rusby, H. H., states that he has met with marshmallow root of wild growth from which the bark had never been removed.—Practical Druggist, 1910, v. 27, p. 423.

LaWall and Bradshaw report finding 5.49 per cent ash in althæa root.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Eldred, Frank R., reports that twelve lots of powdered althæa yielded from 4.9 to 7.3 per cent of ash.—*Ibid.* p. 890.

ALUMEN.

Langkopf, O., reports observations on the changes in the composition of alum preserved in a zinc container.—Pharm. Zentralh. 1910, v. 51, pp. 333–334.

Parsons and Evans report observations on the diffusion phenomena of the alums, and conclude that when alums are dissolved in water they are decomposed into the simple sulphates, which can be separated from each other by diffusion.—J. Am. Chem. Soc. 1910, v. 32, pp. 1378–1383.

Riedel's Berichte (1910, p. xxvii) suggests that the hydrogen sulphide test for alum be corrected to provide for the limit of iron permitted by the ferrocyanide test.

Puckner and Hilpert outline a method for the estimation of alum in mixtures containing it.—Rep. Chem. Lab. Am. M. Ass. 1910, v. 3, p. 21.

Sayre, L. E., reports 3 samples of powdered alum: 2 passed; 1 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1095.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 8) report that iron is still a persistent impurity of alum, being most evident in ground samples.

Boggs, Thomas R., presents a note on alum baths in typhoid fever as a prophylactic against skin infection, with tabulated results of 394 cases treated without, and 210 treated with alum baths.—J. Am. M. Ass. 1910, v. 54, p. 2124.

ALUMEN EXSICCATUM.

LaWall, Charles H., points out that as recently stated by other investigators the rubric for exsiccated alum should be brought into complete accordance with practical requirements. If strictly interpreted it does not allow even a trace of moisture. This is impracticable. A limit of moisture should be given (not more than 2 or 3 per cent) and a method for its estimation should be included.—Am. J. Pharm. 1910, v. 82, p. 21.

Pearson, W. A., reports that exsiccated alum rarely if ever conforms to the solubility demanded by the U. S. P.—Proc. Pennsylvania Pharm. Ass. 1910, p. 134.

See also Woolsey, J. F.—*Ibid.* p. 134.

ALUMINI HYDROXIDUM.

Osborne, Oliver T., thinks there is no need in the Pharmacopœia for aluminum hydroxide.—J. Am. M. Ass. 1910, v. 54, p. 132.

ALUMINI SULPHAS.

Osborne, Oliver T., thinks there is no need in the Pharmacopœia for aluminum sulphate.—J. Am. M. Ass. 1910, v. 54, p. 132.

AMMONIACUM.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 11) point out that the Ph. Germ. V gives as the origin of ammoniac *Dorema ammoniacum* Don and other species of *Dorema*. The ash content is given as varying from 5 to 7.5 per cent.

AMMONII BENZOAS.

The Committee of Reference in Pharmacy suggests that the test for chlorides in ammonium benzoate be modified.—Brit. & Col. Drug. 1910, v. 58, p. 29.

Seidell, Atherton, reports experimental determinations on the solubility of ammonium benzoate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 22.8 gm., and 100 gm. of U. S. P. alcohol will dissolve 3.5 gm. of ammonium benzoate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 25–26, 91.

Menge, George A., in a study of melting point determinations, reports on 4 samples of ammonium benzoate which were found to decompose at the melting point. The corrected results approximated 192.3° to 193.3°. The value required by the Pharmacopœia is 193° to 194°.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 86.

Seidell and Menge discuss the pharmacopœial tests for ammonium benzoate, report analytical results upon samples of ammonium benzoate by the distillation method and by the formaldehyde method, and also discuss the determination of the melting points of mixtures of ammonium benzoate and benzoic acid.—Am. J. Pharm. 1910, v. 82, pp. 12–20.

Sayre, L. E., reports on 1 sample of ammonium benzoate: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1095.

Reid, E. Emmet, reports observations on the equilibrium between ammonium benzoate and benzamide and water.—Am. Chem. J. 1910 v. 44, pp. 76–80.

AMMONIUM BIFLUORIDE.

Merritt, A. H., reports that a solution of ammonium bifluoride, devised by Joseph Head of Philadelphia, has proven itself to be a most valuable therapeutic agent in the treatment of pyorrhœa alveolaris.—Dental Cosmos, 1910, v. 52, p. 1002.

AMMONII BROMIDUM.

Dohme and Engelhardt state that the Ph. Hung. III requires ammonium bromide to be 98 per cent pure.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1172.

Bachman, G., reports that the ammonium bromide examined showed a minimum percentage of 96.13, a maximum of 96.82.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Brown, Linwood A., points out that ammonium bromide frequently turns dark when exposed to light, which is believed to be due to small amounts of iron present.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 135.

Osborne, Oliver T., thinks it quite doubtful if ammonium bromide is less depressant than sodium bromide. It certainly is much more disagreeable to take.—J. Am. M. Ass. 1910, v. 54, p. 291.

AMMONII CARBONAS.

The Committee of Reference in Pharmacy thinks the titration value of ammonium carbonate is too high; 1 gm. should require not less than 17.5 cc. of the volumetric solution of sulphuric acid for neutralization. (Compare also Report, 1908, p. 9.)—Brit. & Col. Drug. 1910, v. 58, p. 29.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 8) endorse the proposed reduction, in the Ph. Brit., of the alkali value of ammonium carbonate.

Bachman, G., reports that the ammonium carbonate examined showed a minimum percentage of 93.97, a maximum of 97.15.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Brown, Linwood A., points out that ammonium carbonate, when exposed to the air, gives off vapors of ammonia and carbon dioxide, leaving a residue of ammonium bicarbonate as a white powder.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 135.

Brady, William, states that ammonium salts exert their influence for about three hours and should be given accordingly, not three times a day.—N. York M. J. 1910, v. 91, p. 210.

Henderson, V. E., finds that ammonium salts have a central action on the salivary glands but also a reflex action which is probably more important.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, p. 6. See also p. 159.

An unsigned abstract (Hom. Envoy) states that persons inclined to faint may need ammonium carbonate.—J. Am. Inst. Homœop. 1910, v. 2, p. 138.

AMMONII CHLORIDUM.

Riedel's Berichte (1910, p. xxvii) points out that ammonium chloride in crystals invariably reacts acid and not neutral.

Frankforter, Roehrich and Manuel report observations on the reactions between ammonium chloride and potassium dichromate when heated.—J. Am. Chem. Soc. 1910, v. 32, pp. 178–184.

Barton, Wilfred M., points out that ammonium chloride cannot act as an expectorant.—J. Am. M. Ass. 1910, v. 55, p. 286.

AMMONII IODIDUM.

Whitney, D. V., reports examining 3 samples of ammonium iodide, 1 contained free iodine.—Proc. Missouri Pharm. Ass. 1910, p. 107.

Brown, Linwood A., points out that ammonium iodide is very deliquescent, and frequently turns yellow, due to liberated iodine.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 135.

Dunning, H. A. B., points out that different methods are directed for determining the percentage strength and limit of the other halogen salts in the assay process for ammonium iodide and sodium iodide.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 969.

The members of the New England Branch of the A. Ph. A. think that ammonium iodide, being unstable, might be omitted and in its stead a formula for a solution similar to solution of ammonium acetate to be prepared extemporaneously.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 150.

Osborne, Oliver T., thinks there is no reason for including ammonium iodide in the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 291.

AMMONII SALICYLAS.

Seidell, Atherton, reports experimental determinations on the solubility of ammonium salicylate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 103.2 gm., and 100 gm. of U. S. P. alcohol will dissolve 42.86 gm. of ammonium salicylate.—Bull. No. 67, Hyg. Lab., U. S. P. H. & M.-H. S., 1910, pp. 62–64, 91.

Osborne, Oliver T., thinks there is no reason for including ammonium salicylate in the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 291.

AMMONII VALERAS.

Seidell, Atherton, states that since no particular composition is required by the Pharmacopœia for ammonium valerate it appeared useless to prepare samples and make solubility determinations until some definite requirements are made for this salt.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 89–90.

Brown, Linwood A., states that ammonium valerate is slightly efflorescent in very dry air, but deliquescent upon coming in contact with moist air.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 135.

Mossler, Gustav, discusses the physical and chemical characteristics of valeric acid and enumerates a number of tests for identity and purity.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, p. 483.

Bourdet, L., criticizes the Ph. Fr. V compound solution of ammonium valerianate, which he asserts does not keep well.—Bull. sc. pharmacol. 1910, v. 17, p. 717.

Sayre, L. E., reports on 2 samples of elixir of ammonium valerianate: 1 passed; 1 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1095.

AMYGDALA.

Harris, Wm., states that almond was introduced into Jamaica in 1778 by Thos. Clark.—Bull. Dept. Agric., Jamaica, 1910, v. 1, No. 3, p. 182.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 12) point out that according to the Ph. Germ. V, sweet almonds are to be distinguished by the absence of amygdalin in the embryo of the seed and the consequent absence of bitter taste on chewing.

Hartwich, C., criticizes the Ph. Germ. V monograph for sweet almonds, more particularly the microscopical description and the test for the presence of bitter almonds, which he asserts is incomplete, in that the necessity for the presence of water is not indicated.—Apoth. Ztg. 1910, v. 25, p. 1034.

Gehe & Co. (Handels-Bericht, 1910, p. 46) point out that granulated or powdered almonds are frequently adulterated with chopped filberts, coconuts, peanuts and the seeds of *Anacardium occidentale.*

LaWall and Bradshaw report finding 3.75 per cent ash in almond meal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Schneider, Albert, discusses the structural characteristics of amygdala. Some almond meals, so called, contain no almonds, consisting of starch with almond oil added. Orris root is sometimes added. The adulterations are easily detected, as a rule.—Merck's Rep. 1910, v. 19, p. 61.

Rosenthaler, L., reports observations on the decomposition of amygdalin under the influence of emulsin.—Arch. Pharm. 1910, v. 248, pp. 534–535. See also *Ibid.* pp. 105–112.

Hommell, Philemon E., thinks that syrup of almond should be directed to be made extemporaneously, as it does not keep.—Merck's Rep. 1910, v. 19, p. 121.

Beringer, George M., thinks that for syrup of almonds the Pharmacopœia should return to the formula of the U. S. P. 1890.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1244.

AMYLIS NITRIS.

Dohme and Engelhardt state that the Ph. Hung. III requires that amyl nitrite should boil between 97° and 99°. No assay process is given.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1172.

The Committee of Reference in Pharmacy thinks that reference to the position of the bulb of the thermometer should be omitted. The sentence "If it be added * * * will be found" should be deleted. Amyl nitrite should be kept in small stoppered bottles in a cool, dark place. (Compare also Report, 1908, p. 10).—Brit. & Col. Drug. 1910, v. 58, p. 29.

Brady, William, states that amyl nitrite is instantaneous in action and its effect lasts only about 20 minutes; it is therefore useful only in emergencies.—N. York M. J. 1910, v. 91, p. 210.

Barton, Wilfred M., thinks it a sign of progress that the ridiculous custom of using amyl nitrite as a heart stimulant in anæsthetic accidents and shock is becoming more and more rare.—J. Am. M. Ass. 1910, v. 55, p. 286.

AMYLUM.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 12) point out that the starch of the Ph. Germ. V is to be derived from *Oryza sativa* Linné. Amylum tritici is to be derived from *Triticum sativum* Lamarck instead of *T. vulgare*. The maximum moisture content is given as 12 per cent, which is considered unnecessarily high.

Kaufmann, W. P., presents a review of maize products and of maize starch and its products.—J. Soc. Chem. Ind. 1910, v. 29, pp. 527–531.

LaWall, Charles H., reports that some commercial varieties of corn starch contain appreciable amounts of nitrous acid or nitrites, which might occasion difficulty in its use as an indicator. A test for the presence of nitrous acid or nitrites by the Griess-Ilosvay method should be given. A method for the estimation of the 95 per cent of hydrolizable carbohydrates should also be included if this requirement is retained.—Am. J. Pharm. 1910, v. 82, p. 21.

Malfitano and Moschkoff describe a method for the complete demineralization of starch.—Compt. rend. Acad. sc. 1910, v. 151, p. 817.

An editorial (Pharm. J. 1910, v. 30 (84), p. 631) comments on the difficulty in identifying the many varieties of starch, some of which may be recognized by a very cursory microscopical examination; in the case of others, particularly mixtures, even a careful examination leaves one in doubt.

ANISUM.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 36) point out that the Ph. Germ. V permits an ash content of 10 per cent in anise and prescribes a chemical test to differentiate it from conium.

LaWall and Bradshaw report finding from 5.35 to 9.9 per cent ash in anise seed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Rusby, H. H., states that anise is very frequently contaminated with 25 per cent or more of sand and is ground in this condition.—Drug. Circ. 1910, v. 54, p. 7.

Schneider, Albert, describes the general histology of the various umbelliferous fruits, and states that anise is sometimes accidentally adulterated with conium and other umbelliferous fruits. It is not generally adulterated intentionally, as it is cheap and easily grown everywhere.—Merck's Rep. 1910, v. 19, p. 61.

ANTHEMIS.

LaWall and Bradshaw report finding from 4.7 to 5.87 per cent ash in anthemis.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Klobb, Garnier and Ehrwein describe certain hydrocarbons derived from *Anthemis nobilis*.—Bull. Soc. chim. France, 1910, v. 7, p. 948.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 129) review the Ph. Ital. III requirement for chamomile oil.

Hill and Umney propose a monograph for oleum anthemidis for the Ph. Brit.—Pharm. J. 1910, v. 30 (84), p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

For comments see Schimmel & Co. (Semi-Annual Report, April 1910, p. 137); Stafford Allen & Sons, Ltd., Chem. & Drug. 1910, v. 76, p. 372, and Harvey and Wilkie. *Ibid.* p. 421.

Henderson, H. John, suggests that the optical rotation of oleum anthemidis be from 0° to +3°.—Pharm. J. 1910, v. 31 (85), p. 139. Also Year-Book of Pharmacy, 1910, p. 385.

Hill and Umney, replying to criticisms, suggest for oleum anthemidis a rotation of −1° to +3°.—Pharm. J. 1910, v. 31, (85), p. 437.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 21) report on 3 samples of English chamomile oil: specific gravity 0.905 to 0.9065.

Yeager, Wm. H., states that chamomilla is most valuable in the milder forms of bowel troubles in children.—Hahnemann. Month. 1910, v. 45, p. 371.

ANTIMONII ET POTASSII TARTRAS.

Dohme and Engelhardt outline the Ph. Hung. III purity test for antimony and potassium tartrate.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1186.

Seidell, Atherton, reports experimental determinations on the solubility of antimony and potassium tartrate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 8.52 gm. of antimony and potassium tartrate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 81–83, 91.

Bachman, G., reports that the tartar emetic examined showed a minimum percentage of 92.9, a maximum of 98.17.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Sayre, L. E., reports on 2 samples of wine of antimony: both illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1095. See also Bull. Kansas Bd. Health, 1910, v. 6, p. 235.

Monroe, A. Leight, quotes Walter Joel Brown who recommends antimony tart. in the treatment of obstinate cases of acne with longing for acids and where there is decided tendency to pustulation.—Hahnemann. Month. 1910, v. 45, p. 716.

ANTIPYRINA.

Menge, George A., in a study of melting point determinations, reports on 6 samples of antipyrine which were found to melt at from 110.2° to 110.8°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 85. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1042.

Eldred, Frank R., reports that the melting point of ten lots of antipyrine was found to vary from 109° to 110°. Judging from these figures and those reported by other chemists, the melting point of 113° as given in the U. S. P., and in many of the standard works on chemistry, is too high. A melting point of 109° to 111° would probably be acceptable.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 890.

Rosenthaler and Görner, in a report on the use of aromatic nitroderivatives as precipitants, state that antipyrine, in dilutions up to 1:500 gives with trinitrophenols well formed crystals. Trinitrophloroglucin is more sensitive than picric acid as reagent for antipyrine.—Ztschr. anal. Chem. 1910, v. 49, p. 343.

Sleeswijk, C., outlines methods for the iodometric determination of antipyrine in migrainin.—Pharm. Weekblad, 1910, v. 47, pp. 1282–1283.

Cohn, Georg, discusses the pharmacology and toxicology of pyrazol derivatives, and the chemistry of antipyrine, its salts and combinations.—Pharm. Zentralh. 1910, v. 51, pp. 1005–1014, 1029–1036.

An editorial (Lancet, 1910, v. 178, p. 449), discussing the harmful effects of antipyrine, acetanilide and phenacetin, calls attention to Bulletin No. 126, Bureau of Chemistry, U. S. Department of Agriculture.

Wallace, G. D. H., reports a case of acute poisoning from 10 grains of antipyrin, in a girl of 20 years.—Lancet, 1910, v. 179, p. 101.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 95–96) calls attention to an antiseptic application suggested by Monteil, the chief ingredients of which are antipyrine and resorcin.

For additional comments on the uses of antipyrine see J. Am. M. Ass. and Index Medicus.

APIOL.

"C. T. B." describes the general properties of the apiols of commerce which are usually designated as green, yellow and white.—Brit. & Col. Drug. 1910, v. 58, p. 235.

Lutz and Oudin discuss the properties of apiol and the character of some of its adulterants.—Ann. Falsif. 1910, v. 3, pp. 335–340.

APOCYNUM.

Holm, Theo., describes the upper part of the stem and the structural characteristics of *Apocynum cannabinum* L.—Merck's Rep. 1910, v. 19, pp. 277–280.

Rusby, H. H., asserts that the requirements for apocynum cannot be established until the proper species has or have been determined, and this involves research work in all departments.—Drug. Circ. 1910, v. 54, p. 616.

LaWall and Bradshaw report finding 3.4 per cent ash in apocynum cannabinum.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Gehe & Co. (Handels-Bericht, 1910, p. 118) report that apocynum is gradually being introduced in Germany as a diuretic and cardiac, and that it appears to be worthy of careful study.

Dale and Laidlaw (Heart, November 2, 1909) report upon the action of the active principles of apocynum. The effects characteristic of two species (*A. cannabinum* and *A. androsæmifolium*) are due to their bitter principles, called cynotoxine and apocynamine.—Nouv. remèdes, 1910, v. 26, p. 343.

Githens and Vanderkleed discuss the physiologic standardization of cardiac stimulants and present a standard for fluid extract and tincture of apocynum.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 918.

Wood, H. C., recommends the guinea pig method for standardizing apocynum.—*Ibid.* pp. 941–942.

Sloat, Harrison Greanleaf, reports his observations on the use of apocynum cannabinum as a remedy in the routine treatment of alcoholism.—Hahnemann. Month. 1910, v. 45, p. 52.

Leming, W., asserts that the keynote of apocynum is atony, atony permitting the leakage from the circulatory system. Accompanying are generally such signs as puffy eyelids, swollen feet, heaviness of the abdominal organs and diminished urinary excretion.—Eclectic M. J. 1910, v. 70, pp. 344–346.

APOMORPHINÆ HYDROCHLORIDUM.

Dohme and Engelhardt state that the Ph. Hung. III directs that if an aqueous solution of apomorphine hydrochloride turn green, the preparation should at once be rejected.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1172.

Brown, Linwood A., points out that apomorphine hydrochloride is easily affected by light, acquiring a greenish color, forming an emerald green colored solution. Alkalies promote this change, and for this reason the bottles should be rinsed with dilute hydrochloric acid before filling.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 152.

Cohn, Georg, discusses the chemistry of apomorphine and of apocodeine.—Pharm. Zentralh. 1910, v. 51, p. 322.

Menge, George A., reports a study of 6 samples of apomorphine hydrochloride and points out that this compound decomposes at the melting point.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 87.

Frerichs, G., reports on a false apomorphine, and comments on articles by Voswinkel and others, criticizing his former communication.—Apoth. Ztg. 1910, v. 25, pp. 14–15.

Harnack and Hildebrandt discuss some of the newer, unreliable apomorphine preparations.—Pharm. Ztg. 1910, v. 55, pp. 6–7.

Gehe & Co. (Handels-Bericht, 1910, p. 107) point out that the emetic properties of apomorphine are uniformly reliable when injected hypodermically, and that this test is of practical value in the detection of impure or adulterated products such as that recently described by Harnack.

Henderson, V. E., finds that apomorphine acts directly upon the salivary center. It has no peripheral action on the gland.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, p. 6. See also p. 160.

Hattori, T., discusses the action of apomorphine on the reflex function of the frog.—Arch. internat. pharmacodyn. et thérap. 1910, v. 20, pp. 57–61.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 99–100) calls attention to several contributions on impure commercial apomorphine hydrochloride and gives the tests applicable to this salt.

AQUÆ.

Dohme and Engelhardt state that the Ph. Hung. III directs that all the aromatic waters be prepared by distilling the volatile oils from the respective drugs by live steam.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1172.

Wulff, C., calls attention to the method of making distilled or aromatic waters as described in the Ph. Ital. III.—Apoth. Ztg. 1910, v. 25, p. 907.

Eberle, E. G., states that, instead of having formulas for the various waters requiring 2 cc. of oil to 1000 cc. of water, a general formula suggesting this proportion should be included, and anise, cinnamon, fennel, peppermint and spearmint dropped, as distinct formulas.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, p. 60) continues the discussion on the official waters, the method of making them and their uses.

AQUA.

Dané, A., discusses the rapid examination of water, and describes methods for the estimation of magnesia, sulphates, carbonic acid and organic materials.—Chem. Ztg. 1910, v. 34, pp. 1057–1058.

Purvis, J. E., discusses the interpretation of water analysis reports.—Year-Book of Pharmacy, 1910, pp. 362–363. See also Brit. & Col. Drug. 1910, v. 58, p. 102.

Rochaix and Dufour assert that every water which gives the complete reaction with neutral red is a water contaminated with human or animal excreta.—Compt. rend. Soc. Biol. 1910, v. 69, p. 314.

Booth, William M., enumerates some of the water problems in the territory east of the Mississippi River.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 503–510.

Debuchy describes a practical method of utilizing permanganate for the disinfection of water.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 302–303.

Basch, E. E., criticizes the communication by Drawe on water purification.—Ztschr. ang. Chem. 1910, v. 23, pp. 2205–2206.

Hundeshagen, Franz, replies to criticisms by Drawe on his article relating to the purification of water.—*Ibid.* p. 1262. Drawe adds further explanations.—*Ibid.* p. 1263.

Riedel's Berichte (1910, pp. xi–xxiv) presents observations on the production and uses of artificial zeolithe (permutite), and discusses the value of this substance in connection with the purification of water.

A number of references on the purification of water and the regulation of water supplies will be found in Hyg. Rundschau, 1910, v. 20.

AQUA AMMONIÆ.

An unsigned article (Am. Druggist, 1910, v. 57, p. 164) calls attention to a paper by Haber on the manufacture of ammonia from nitrogen and hydrogen. See also Chem. Trade J., Lond., 1910, v. 46, p. 381.

Richardson, W. D., outlines methods for testing commercial, anhydrous, liquid ammonia.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 97–99.

Rupert, Frank F., reports a further study of the solid hydrates of ammonia.—J. Am. Chem. Soc. 1910, v. 32, pp. 748–749.

Wilkie, John M., discusses the Ronchèse method of determining ammonia and its extension to the determination of the total acid content of organic ammonium salts and ammoniacal solutions.—J. Soc. Chem. Ind. 1910, v. 29, pp. 6–7.

Davis, James E., reports that ammonia presents the difficulty of losing strength through evaporation or decomposition. This, however, is not a valid defense for selling goods below standard.—Proc. Michigan Pharm. Ass. 1910, p. 62.

Kahn, Joseph, asserts that aqua ammoniæ is frequently below standard and attributes this to defective storage or the attempt to make this preparation from the stronger water of ammonia by dilution.—D.-A. Apoth. Ztg. 1910–11, v. 31, p. 58. See also Proc. New York Pharm. Ass. 1910, p. 169.

Table showing some of the analytical results reported for water of ammonia.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Sayre, L. E.	3	3	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1095.
Wulling, Frederick J.	4	4	Northwestern Druggist, 1910, v. 11, Sept., p. 25.
Bachman, G.	5	5	Proc. Minnesota Pharm. Ass. 1910, p. 63.
Mains, S. L.	20	14	Proc. Nebraska Pharm. Ass. 1910, p. 51.
Arny, H. V.	15	10	Proc. Ohio Pharm. Ass. 1910, p. 69.
Brown, Lucius P.	30	28	Bull. No. 3, Tennessee Food and Drugs Insp., 1910, pp. 38–39.
Knight, Henry G.	4	3	Rep. Dairy, Food & Oil Com., Wyoming, 1910, p. 38.

AQUA AMMONIÆ FORTIOR.

Patch, E. L., says that 30 carboys of stronger ammonia water assayed from 25.91 to 30.48 per cent. All had some empyreumatic odor on neutralizing. Only "C. P." product readily answers U. S. P. test.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 741.

Scoville, W. L., asserts that stronger ammonia water bought near the sources of manufacture often runs above 28 per cent. Shipped any considerable distance, especially in warm weather, runs between 26 and 28 per cent.—*Ibid.* p. 741.

Pearson, W. A., says that most commercial samples of strong solution of ammonia fail to completely volatilize at 100°. Usually there remains about 0.02 per cent of light brown residue. A few samples have contained an excess of readily oxidizable substances.—Proc. Pennsylvania Pharm. Ass. 1910, p. 134.

Table showing some of the analytical results reported for stronger water of ammonia.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Bachman, G.	2	2	Proc. Minnesota Pharm. Ass. 1910, p. 63.
Brown, Lucius P.	7	7	Bull. No. 3, Tennessee Food and Drugs Insp. 1910, p. 30.
Wulling, Frederick J.	2	2	Northwestern Druggist, 1910, v. 11, Sept., p. 25.
Knight, Henry G.	8	2	Rep. Dairy, Food & Oil Com., Wyoming, 1910, pp. 37–38.

Osborne, Oliver T., thinks there is no reason for including stronger ammonia water in the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 291.

AQUA AURANTII FLORUM.

Eberle, E. G., states that there is no standard of strength for stronger rose and orange flower waters; dilutions would vary. He asks why not have orange and rose water official.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

Laloue, G., contributes a paper on oil of orange flowers.—Bull. Soc. chim. France, 1910, v. 7, pp. 1101–1107. See also Roure-Bertrand Fils (Sc. & Ind. Bull., April 1910, pp. 43–50).

Schimmel & Co. (Semi-Annual Report, April 1910, p. 27) comment on the Ph. Hung. III requirements for neroli oil. Also (*Ibid.* April 1910, p. 131) review the Ph. Ital. III requirement for neroli oil.

AQUA DESTILLATA.

Dohme and Engelhardt state that the Ph. Hung. III gives detailed directions for preparing distilled water, and directs that only a sufficient quantity of water for immediate use be prepared.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1173.

Brown, Linwood A., states that distilled water is the only water that should be used in the manufacture of preparations or in prescription practice.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 154.

Beringer, George M., points out that some of the foreign pharmacopœias, as well as the U. S. P., are not careful to direct distilled water in the making of syrups. He states that the Danish Pharmacopœia is a model in this respect.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1243.

Cowie, W. B., publishes the results of his analyses of a number of commercial distilled waters and calls attention to the danger in using water from a continuous still, a type largely used by pharmacists.—Pharm. J. 1910, v. 30 (84), p. 52. Also pp. 99, 129.

AQUA HYDROGENII DIOXIDI.

The monograph for solution of hydrogen dioxide, to be included in the Ph. Germ. V, requires that this article contain 3 per cent by weight of H_2O_2. The monograph also includes an assay method.—Pharm. Zentralh. 1910, v. 51, p. 207.

v. Girsewald, C., presents a review of the progress of the peroxide industry up to July 1, 1909, and enumerates the various peroxide products that are now being put on the market.—Chem. Ind. 1910, v. 33, pp. 95–105.

An unsigned article (Meyer Bros. Drug. 1910, v. 31, p. 68) calls attention to the rapid development in the production and uses of hydrogen peroxide, an article comparatively unknown in 1882.

Francis, John M., asserts that there is enough hydrogen peroxide produced in the United States every year to float the "Lusitania", but there still remains a great deal to be learned about it.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 912.

Dohme and Engelhardt discuss a recent paper by Francis on peroxide of hydrogen and review some of the suggestions that have been made regarding the preservation of this article.—Am. J. Pharm. 1910, v. 82, pp. 69–71. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 231.

An editorial (Drug Topics, 1910, v. 25, p. 37) thinks that Dohme and Engelhardt are wrong in their suggestion that acetanilide as a preservative for hydrogen peroxide is objectionable, and that an increase in the amount of free acid in this preparation is more desirable.

Thome, E. R., thinks that the use of 0.04 gm. acetanilide in 100 cc. of hydrogen dioxide should be permitted.—Practical Druggist, 1910, v. 28, p. 122.

Gane and Webster point out that the addition of acetanilide as a preservative to hydrogen dioxide might with advantage be included in the Pharmacopœia, allowance being made therefor in the test for solid residue, and a test included to show its presence.—Drug Topics, 1910, v. 25, p. 4.

The Bulletin of Pharmacy (1910, v. 24, p. 241) calls attention to the statement of L. F. Kebler that those preparations of hydrogen peroxide had been found to keep best which were preserved with acetanilide. He could see no objection to the use of this preservative on any ground whatever so long as its content was stated on the package. See also *Ibid.* p. 222.

Caspari, C. E., has frequently seen samples of hydrogen peroxide which apparently were identical in every respect, as to age, and quantity of acetanilide contained in them, and yet in the same period of time some of these would develop the odor of nitrobenzene, and become yellow, while others would not. He thinks that the oxidizing power of peroxide on acetanilide is not as yet clearly understood.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 913.

Tian states that the action of light on hydrogen dioxide is very different from that of heat; it appears analagous, from the nature of the reaction which it provokes, to that of a catalyser.—Compt. rend. Acad. sc. 1910, v. 151, pp. 1040–1042.

Wöhler and Frey discuss the determination of the acid content of hydrogen dioxide solution.—Ztschr. ang. Chem. 1910, v. 23, pp. 2353–2354.

Kebler, Lyman F., thinks that hydrogen dioxide should be dated and should not be dispensed 6 months or at most a year after being made.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 213.

Robinson, William J., states that the incompatibles of hydrogen dioxide are: potassium permanganate, carbolic acid, chlorine water, ferric chloride, iodides, ammonia water, potassium hydroxide, sodium hydroxide.—Critic and Guide, 1910, v. 13, p. 136.

Spoehr, H. A., discusses the behavior of the ordinary hexoses toward hydrogen peroxide in the presence of alkaline hydroxides, as well as of various iron salts.—Am. Chem. J. 1910, v. 43, pp. 227–257.

Barnett, Edward DeBarry, reports observations on the action of hydrogen dioxide on thiocarbamides.—J. Chem. Soc., Lond., 1910, v. 97, pp. 63–65.

Spitalsky, Eugen, presents some additional observations on the catalysis of hydrogen dioxide in which he replies to the criticisms made by Riesenfeld (Berichte, 1909, v. 41, p. 2832).—Ber. deutsch. chem. Gesellsch. 1910, v. 43, pp. 3187–3201.

Firbas, Richard, discusses the testing of hydrogen dioxide solution, and points out that, in addition to the quantitative test, qualitative tests for the presence of objectionable contaminations and preservatives would appear to be desirable.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, pp. 438–439. See also Pharm. Post, 1910, v. 43, pp. 829–830.

Brown, Linwood A., discusses the determination of free acid in hydrogen peroxide solutions, and concludes that the U. S. P. method for free acid does not yield trustworthy results.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 377–378.

Denigès, G. (Bull. Soc. pharm. Bordeaux, 1909, v. 49, pp. 247–254) discusses the use of guaiacol and quinine as reagents for hydrogen dioxide.—Bull. sc. pharmacol. 1910, v. 17, p. 49.

Skrabal and Vacek outline a method for the titrimetric determination of hydrogen dioxide in the presence of persulphuric acid.—Oesterr. Chem.-Ztg. 1910, v. 13, pp. 27–29.

Charitschkoff, K., describes a new reagent for hydrogen dioxide, consisting of a benzin or benzol solution of naphthene acid which gives with a neutral or slightly acid solution of cobalt salts a rose-red color that in the presence of oxidizing agents is turned to dark brown or olive green.—Chem. Ztg. 1910, v. 34, p. 50.

Kebler, Lyman F., reports on the quality of medicinal hydrogen dioxide at present on the market.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 903–911.

Potter, Hubert F., reports the examination of a sample of hydrogen dioxide which was found to contain 0.136 grain acetanilide per fluid ounce, and only 21.67 per cent hydrogen dioxide.—Rep. Connecticut Dairy and Food Com., 1910, Hartford 1911, p. 137.

The Committee on Adulterations enumerates the tests for the detection of hydrogen dioxide and reports that a few of the samples examined showed deviation from standard strength.—Proc. New York Pharm. Ass. 1910, p. 169.

LaWall, Charles H., asserts that a test for the presence of acetanilide in hydrogen dioxide should be given. He describes a test which he has found satisfactory.—Am. J. Pharm. 1910, v. 82, p. 22.

Notice of Judgment No. 216 relates to adulteration and misbranding of hydrogen peroxide.

Eberle, E. G., states that the solution of hydrogen dioxide ought to allow for alkalinity (if made from perborates).—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

Davis, James E., reports that peroxide of hydrogen presents the difficulty of losing strength through evaporation or decomposition. This, however, is not a valid defense for selling goods below standard.—Proc. Michigan Pharm. Ass. 1910, p. 62.

Kahn, Joseph, reports that many of the samples of hydrogen dioxide examined differed materially from the standards of the Pharmacopœia.—D.-A. Apoth. Ztg. 1910–11, v. 31, p. 58.

Bernegau, L. H., reports that of the many lots of hydrogen dioxide examined, all contained the required amount of H_2O_2 or over. The acidity in many cases exceeded the U. S. P. limit, in some cases by as much as 20 per cent of the maximum amount allowed. All were preserved with acetanilide.

Table showing some of the analytical results reported for solution of hydrogen dioxide.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Wulling, Frederick J	4	4	Northwestern Druggist, 1910, v. 11, Sept., p. 25.
Arny, H. V	15	3	Proc. Ohio Pharm. Ass. 1910, pp. 69–70.
Bachman, G	4	4	Proc. Minnesota Pharm. Ass. 1910, p. 63.
Grimes and Shelor	20	4	Proc. Virginia Pharm. Ass. 1910, pp. 99–106.

Kikkoji and Neuberg present a note on the utilization of hydrogen dioxide in oxydase experiments.—Biochem. Ztschr. 1909–10, v. 20, pp. 523–525.

Laurie, R. Douglas, describes an apparatus for continuous irrigation with hydrogen peroxide.—Brit. M. J. 1910, v. 1, p. 24. Also Lancet 1910, v. 178, p. 378.

Levaditi and Landsteiner assert that hydrogen peroxide may be used as an antiseptic in the prophylaxis of acute epidemic poliomyelitis.—Compt. rend. Soc. Biol. 1910, v. 68, p. 741.

Hill, Wm. P., discusses the use of peroxide in pneumonia.—Am. Vet. Rev. 1910–11, v. 38, pp. 673–674.

An editorial (*Ibid.* p. 9) discusses the use of peroxide of hydrogen in pneumonia in horses.

AQUA HYDROGENII DIOXIDI (30 PER CENT).

Dohme and Engelhardt state that the Ph. Hung. III recognizes only a preparation containing 30 per cent of absolute peroxide of hydrogen.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 278–283) calls attention to a number of communications on the use of perhydrol.

AQUA ROSÆ FORTIOR.

Gane and Webster point out that, inasmuch as all the other waters are saturated solutions, there is not much logic in calling a similar rose water a "stronger" preparation. Better call the weaker, Aqua Rosæ Diluta.—Drug. Topics, 1910, v. 25, p. 4.

ARGENTI NITRAS.

Gruener, Hippolyte, reports observations on the formation of silver nitrate by the action of nitric acid on silver sulphide.—J. Am. Chem. Soc. 1910, v. 32, pp. 1030–1032.

Ribaut, H., criticizes the Ph. Fr. V reference to the detection of bismuth, copper and lead in silver nitrate and suggests a new rubric.—Bull. sc. pharmacol. 1910, v. 17, p. 143.

Thum, John K., presents a note on the so-called emulsion of silver iodide, and outlines a method for making the same.—Am. J. Pharm. 1910, v. 82, pp. 507–508.

Brown, Linwood A., points out that all silver salts are quite readily affected by light, turning brown or black, or by coming in contact with organic matter, which reduces them to metallic silver, rendering them unfit for the use to which they are intended.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 136.

Robinson, William J., states that the only real incompatability of silver nitrate that occurs in practice, is with sodium chloride and perhaps sodium bicarbonate.—Critic and Guide, 1910, v. 13, p. 135.

The Massachusetts State Board of Health (Rep. 1910, p. 40) issued, during the period July to November 30, 1910, to physicians 5,278, and to boards of health 1,641, silver nitrate solution outfits for use in cases of ophthalmia neonatorum.

Feilchenfeld, Wilhelm (Deut. med. Wchsnchr. 1909, p. 2318) asserts that the number of blind in Germany has been reduced from 8.8 0/000 in 1871 to 6.1 0/000 in 1800. He attributes this reduction to the use of prophylactic Credé solution of silver nitrate.—Hyg. Rundschau, 1910, v. 20, p. 963.

Richards, George L., notes a point in the technique of the use of nitrate of silver in the treatment of chronic suppurative otitis media with a report of 5 cases.—Boston M. & S. J. 1910, v. 163, p. 402.

Osborne, Oliver T., states that there is no systematic internal use for silver. Its only use is in the form of the nitrate as a local astringent and caustic. In fact, its use for systematic treatment or action after absorption is probably without justification.—J. Am. M. Ass. 1910, v. 54, p. 133.

Yeager, Wm. H., asserts that argentum nit. is indicated in cases of diarrhœa caused by sugar indigestion.—Hahnemann. Month. 1910, v. 45, p. 378.

Clark, Peter S., injects silver nitrate, 10 to 15 grains to the ounce, in gonorrhœa in the female; for vaginitis, 60 to 80 grains to the ounce.—J. Am. Inst. Homœop. 1910, v. 2, p. 91.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 101–103) calls attention to a combination of silver nitrate and kaolin, proposed by Baruch for the treatment of wounds.

ARGENTI NITRAS FUSUS.

Lemaire, P. (Bull. Soc. pharm. Bordeaux, 1909, v. 49, pp. 32–35) presents a critical study of the new preparations of silver nitrate crayons in the Ph. Fr. V.—Bull. sc. pharmacol. 1910, v. 17, p. 122.

Gane and Webster think that if mitigated caustic is to be retained, despite the little call for it, it might be as well to indicate that other strengths are available for the physician's use. There is more demand for the 50 per cent strength than for the official of 33.3 per cent.—Drug Topics, 1910, v. 25, p. 4.

Osborne, Oliver T., thinks it doubtful if mitigated caustic stick is often used.—J. Am. M. Ass. 1910, v. 54, p. 133.

ARGENTI OXIDUM.

The Committee of Reference in Pharmacy suggests that the following test be substituted for the assay of chloride: ''It should yield not less than 92.5 per cent of metallic silver on ignition.'' (Compare also Report 1908, p. 12.)—Brit. & Col. Drug. 1910, v. 58, p. 29.

Gane and Webster think that silver oxide is obsolete, and will probably be omitted from the Pharmacopœia. It is replaced nowadays by one or other of the new organic silver salts.—Drug Topics, 1910, v. 25, p. 4.

Osborne, Oliver T., thinks that there is no need in the Pharmacopœia for silver oxide.—J. Am. M. Ass. 1910, v. 54, p. 133.

ARGENTUM PROTEINATE.

Hunt, Reid, reports that a proteid silver compound is included in the Ph. Austr., Ph. Belg., Ph. Germ., Ph. Japon, Ph. Mex. and Ph. Helv.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

The monograph on silver proteinate, to be included in the Ph. Germ. V, is reproduced.—Pharm. Zentralh. 1910, v. 51, p. 190. See also J. Pharm. Elsass-Lothringen, 1910, v. 37, p. 55.

The Budapest Correspondent (Lancet, 1910, v. 178, p. 961) notes that argentum proteinicum, commercially known as protargol is indispensable in urological practice and has been added to the Ph. Hung. III.

Gehe & Co. (Handels-Bericht 1910, p. 128) assert that the frequent complaints of untoward results from the use of protargol solutions are due to faulty manipulation in preserving this substance. They point out that it is essential to make solutions in the cold, desirable to avoid metals of all kinds, and to dispense in amber and brown vials.

Goldmann, F., calls attention to some precautions necessary in the dispensing of protargol and similar preparations. He cautions against the use of glycerin, the use of warm water and the keeping of protargol preparations ready made.—Apoth. Ztg. 1910, v. 25, p. 274.

van Itallie, F. I., reports the examination of a number of commercial samples of silver proteinate (protargol) to determine the solubility, water content, ash content, silver content and the percentage of silver in the residual ash.—Pharm. Weekblad, 1910, v. 47, pp. 84–86.

Hommell, Philemon E., states that antiseptic silver compounds, like protargol and arygrol are in great favor among the physicians, and the introduction of such organic metallic silver salts should receive the attention of the Committee of Revision.—Merck's Rep. 1910, v. 19, p. 123.

Kingston, R. H., reports observations on the use of protargol in purpura hæmorrhagica.—Am. Vet. Rev. 1909–10, v. 36, pp. 585–588.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 290–292) calls attention to a number of contributions on the use of protargol, both as a prophylactic and a curative agent.

OTHER UNOFFICIAL SILVER SALTS.

Mossler, Gustav, discusses the properties of silver lactate and outlines tests for identity and purity.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, p. 57.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 105–106) points out that while Stadfeld prefers argyrol to silver nitrate in the treatment of opthalmia neonatorum, van Lint was led by his trials to an opposite view.

The monograph for collodial silver, to be included in the Ph. Germ. V, is reproduced.—Pharm. Zentralh. 1910, v. 51, p. 189. See also J. Pharm. Elsass-Lothringen, 1910, v. 37, pp. 54–55.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 103–105) calls attention to contributions by various authors who have had excellent results from the internal as well as the external use of collargol.

ARNICA.

Beilstein, Christian, reports that 1 lot of arnica flowers was found to contain approximately 90 per cent of inula flowers.—Proc. N. W. D. A. 1910, p. 104.

LaWall and Bradshaw report finding from 6.55 to 8.7 per cent ash in arnica flowers.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Klobb, Garnier and Ehrwein describe certain hydrocarbons derived from *Arnica montana*.—Bull. Soc. chim. France. 1910, v. 7, p. 944.

Hereth, F. S., points out that the Pharmacopœia directs that tincture of arnica be made by maceration, and asks if this tincture is made by percolation may it still be labeled "U. S. P."—Practical Druggist, 1910, v. 28, p. 64.

Nixon, C. F., thinks that the present official process for making tincture of arnica is most unsatisfactory, so much so that it is seldom employed, as maceration is not suited to this particular drug.—Am. J. Pharm. 1910, v. 82, p. 189.

Havenhill, L. D., outlines a modified formula for tincture of arnica.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 785.

Mains, S. L., reports that, of 7 samples of tincture of arnica examined, 3, or 42 per cent, were below standard.—Proc. Nebraska Pharm. Ass. 1910, p. 51.

Sayre, L. E., reports on 23 samples of tincture of arnica: 16 passed; 7 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1095.

Jaffa, M. E., reports the examination of 1 sample of tincture of arnica: illegal.—Bull. California Bd. Health, 1910, v. 6, p. 36.

See also Beal, George D.—Proc. Ohio Pharm. Ass. 1910, p. 73.

Caspari, Charles, jr., points out that at the present time there is no standard for tincture of arnica, except menstruum, and that this standard cannot be complied with where the tincture is made from a fluid extract.—Proc. Maryland Pharm. Ass. 1910, p. 145.

Harbert, J. P., states that arnica is employed with marked success in eye troubles resulting from bruises and various injuries.—Eclectic M. J. 1910, v. 70, p. 10.

Fisher, C. E., says he always relies on arnica as a specific for diseases from mechanical injuries; also in hæmorrhage from wounds.—J. Am. Inst. Homœop. 1910, v. 2, p. 16.

ARSENI IODIDUM.

Brown, Linwood A., states that arsenous iodide is quite readily decomposed, and should be carefully protected from heat, light and air.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 136.

Osborne, Oliver T., asserts that the iodide of arsenic is just as well not made official, as if it is desired to give iodine at the same time that arsenic is administered, it could be given conjointly, and the activity of both drugs better watched.—J. Am. M. Ass. 1910, v. 54, p. 376.

ARSENI TRIOXIDUM.

Riedel's Berichte (1910, p. xxvii) points out that it is not always possible to secure arsenic trioxide freely soluble in ammonia, and suggests a change in the ammonia test.

Bernegau, L. H., reports that arsenic trioxide as it occurs on the market is remarkably pure—only two samples out of thirteen examined running below the required 99.8 per cent and these testing 99.36 and 99.6 per cent respectively.—Proc. Pennsylvania Pharm. Ass. 1910, p. 135.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 11) report that 8 samples of arsenious oxide were estimated to be from 98.3 to 100 per cent pure.

Bachman, G., reports that the arsenic trioxide examined showed a minimum percentage of 90.3, a maximum of 97.7.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Palmer, Howard E., reports observations on the application of potassium ferricyanide in alkaline solution to the estimation of arsenic, antimony and tin.—Am. J. Sc. 1910, v. 29, pp. 399–403.

Smith, W. C. (Eng. Min. J., 88, 1062–3) discusses the separation of arsenic and antimony by means of the Knorr distillation apparatus.—Chem. Abstr. 1910, v. 4, p. 2245.

Lockemann discusses the absorption of arsenious acid by iron hydroxide.—Pharm. Post, 1910, v. 43, p. 830.

Brünnich and Smith discuss the qualitative and quantitative estimation of arsenic acid in the presence of arsenous acid by means of magnesia mixture.—Ztschr. anorg. Chem. 1910, v. 68, pp. 292–296.

Puckner and Warren discuss the estimation of arsenic acid.—Rep. Chem. Lab. Am. M. Ass. 1910, v. 3, p. 38.

Maderna, G. (Atti R. Accad. dei Lincei, Roma, 1910 [5], 19, II, 68–69) discusses the detection of arsenic acid in presence of phosphoric acid.—J. Soc. Chem. Ind. 1910, v. 29, p. 1180.

Sanger and Boughton, for the determination of arsenic in animal tissue, offer an extension of the method of Sanger and Black for the determination of arsenic in urine.—J. Biol. Chem. 1910, v. 7, p. xxxvii.

Denigès, G., discussing the distribution of poison and of fat in a case of acute arsenical poisoning, gives the amounts of arsenic found in the various organs.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, p. 54.

Buckley, J. P., presents the formula for a devitalizing paste containing arsenic trioxide.—Dental Cosmos, 1910, v. 52, p. 429.

Lipschitz, M. (Arch. f. Zahnheilk.) discusses the methodical use of arsenic trioxide in the painless devitalization of the pulp.—Dental Cosmos, 1910, v. 52, p. 496.

Izar, Guido, discusses the action of arsenic on hepatic autolysis.—Arch. farmacol. sper. 1910, v. 9, pp. 254–259.

Wood, H. C., jr., asserts that there is little evidence that anything can be accomplished by inorganic arsenic that cannot be done with the older forms.—J. Am. M. Ass. 1910, v. 55, p. 31.

Osborne, Oliver T., while recognizing that arsenious acid is the best form in which to administer arsenic as a solid nevertheless, considers it a dangerous poison, except in small doses, not more than 0.002 gramme, (1/30) of a grain of the trioxide of arsenic three times a day, and even at this dose it can cause distinct undesired symptoms.—*Ibid.* 1910, v. 54, p. 376.

Monroe, A. Leight, quotes Kinyon who states that arsenium is the remedy for a depraved state of the system from exhausting diseases. Its pathognomic symptoms are too well known to require repetition.—Hahnemann. Month. 1910, v. 45, p. 233.

Yeager, Wm. H., states that arsenicum alb. is indicated in cholera infantum and also in the less acute cases of diarrhœa in children.—*Ibid.* p. 377.

Fyfe, John William, asserts that arsenic in minute doses is a curative agent of great power.—Eclectic M. J. 1910, v. 70, pp. 19–21.

Harbert, J. P., points out that arsenic is indicated in eye diseases characterized by œdematous swelling of the lids and excoriating discharges. Not only are the eyelids and cheeks made sore by the discharge resulting from inflammation, but the tears are also corrosive and gives rise to severe burning pain.—Eclectic M. J. 1910, v. 70, pp. 130–131.

Anderson, W. J. Webb, reports an unusual ending in a [fatal] case of arsenic poisoning.—Lancet, 1910, v. 178, p. 1138.

Additional references to arsenic, the preparations of arsenic and the toxicology of arsenic and its preparations, will be found in the Index Medicus and J. Am. M. Ass.

NONOFFICIAL COMPOUNDS.

Martindale, W. Harrison, discusses some of the newer arsenic compounds and the estimation of arsenic in organic substances.—Chem. & Drug. 1910, v. 76, p. 84.

Covelli, Ercole, presents a differential reaction between the organic derivatives of arsenous and arsenic acid.—Boll. chim. farm. 1910, v. 49, p. 50.

Fiori, Quinto, contributes a note on a reaction for the identity of atoxyl.—*Ibid.* p. 98.

Runnels, Scott C., contributes an article on the carbon compounds of arsenic in the treatment of syphilis.—N. York M. J. 1910, v. 92, pp. 1052–1058; 1124–1128.

Lane, J. Ernst, utters a warning as to the dangers of arylarsonates.—Brit. M. J. 1910, v. 1, p. 599. See also pp. 664, 724, 846.

An editorial (Therap. Gaz. 1910, v. 34, pp. 401–402) discusses new and toxic arsenical preparations, and calls attention to a series of letters contributed to the British Medical Journal on "The Dangers of Arylarsonates." See also *Ibid.* pp. 93–94.

Muto, K., reports observations on the toxicity of atoxyl.—Arch. exper. Path. u. Pharmakol. 1910, v. 62, pp. 494–501.

Paderestein (Berl. klin. Wchnschr. 1909, No. 22) discusses the production of optic atrophy by atoxyl.—Nouv. remèdes, 1910, v. 26, p. 118.

Schlecht, (Münch. med. Wchnschr. No. 19, 1909) reports a fatal case of atoxyl poisoning.—Pharm. Zentralh. 1910, v. 51, pp. 96–97.

An editorial (Am. Druggist, 1910, v. 57, p. 370) discusses salvarsan and its preparation, and calls attention to the danger of using a sample of this drug that has been exposed to the air for a greater length of time than is necessary to compound the injection.

Puckner and Hilpert discuss the chemical properties of salvarsan.—Rep. Chem. Lab. Am. M. Ass. 1910, v. 3, pp. 96–102.

Meltzer, Samuel J., describes dioxydiamidoarsenobenzol or "606," Ehrlich's newest remedy for syphilis.—Am. Druggist, 1910, v. 57, pp. 99–100.

Mindes, J., discusses the chemistry of dioxydiamidoarsenobenzol (Ehrlich-Hata "606") and outlines methods for preparing solutions.—Pharm. Post, 1910, v. 43, p. 837.

Rapp describes the method of preparing solutions of "606" for injection.—Apoth. Ztg. 1910, v. 25, pp. 826–827.

The directions for making solution for the intravenous injection of salvarsan are reprinted.—*Ibid.* p. 971.

Jungeclaussen, C. A., discusses the evolution of our knowledge of organic arsenic preparations from atoxyl to Ehrlich-Hata "606."—*Ibid.* pp. 966–968.

Ehrlich, Paul, reports experiments with "606."—Pharm. Post, 1910, v. 43, pp. 797–798.

Neisser, A., in a discussion of syphilis therapy, calls attention to the class of cases amenable to treatment by "606."—*Ibid.* pp. 798–799.

An editorial (Therap. Gaz. 1910, v. 34, pp. 705–707) reviews some of the published papers on the treatment of syphilis by Ehrlich's dioxydiamidoarsenobenzol.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 1–38; see also pp. 304–319, 343) reviews the literature relating to the use of arsenic, more particularly organic combinations of arsenic.

For additional references on the uses and the toxicology of non-official arsenic preparations see J. Am. M. Ass. and Index Medicus.

ASAFŒTIDA.

Xrayser II contributes a note on the early history of asafetida which is still wrapped in obscurity. The name is a compound of *asa* (a Latinized form of the Persian *azā* = mastic) and *fœtida*, and its element indicates the original geographical source of the drug. Mediæval writers regarded asafetida as a species of laser (*asar lazarum*, as it was sometimes called), derived from a plant allied to, or the same as, Pliny's *laserpitium* of Cyrene, the *silphion cyrenaicon* of Dioscorides.—Chem. & Drug. 1910, v. 76, p. 701.

Tschirch, A., in connection with 2 illustrations of *Ferula narthex* Boiss in the Botanical Garden at Berne, presents a short description of the plant.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 289–292.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 12) point out that the Ph. Germ. V permits an ash content of 15 per cent in place of the former 10 per cent. They assert that commercial asafetida in reality contains from 30 to 50 per cent of ash and will leave from 60 to 70 per cent of material insoluble in alcohol.

Hartwich, C., points out that the Ph. Germ. V recognizes 2 varieties of asafetida: tears and mass; the latter is also recognized by the permissible ash content which has been increased to 15 per cent. He criticises the requirement that asafetida show a white fracture surface, and asserts that the interior of the mass is usually brown with isolated white tears.—Apoth. Ztg. 1910, v. 25, p. 1035.

Rusby, H. H., is reported as saying that, before the Federal law was enacted, the asafetida imported into the United States was abominable in quality—so bad, indeed, that, at the next preceding revision of the Pharmacopœia, the advice was given to abolish the standard for the drug, it being represented that otherwise we could not get sufficient supplies.—Drug Topics, 1910, v. 25, p. 130. See also Practical Druggist, 1910, v. 27, p. 423, and Proc. Am. Pharm. Ass. 1910, v. 58, p. 741.

Gane and Webster report that supplies of this drug fully up to Pharmacopœia standards are rarely obtainable, although the grade is better than it formerly was.—Drug Topics, 1910, v. 25, p. 4. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 741.

Clark, Albert H., asserts that asafetida presents an interesting history. At the present time samples containing 50 per cent alcohol-soluble matter are not uncommon. The ash requirement of not more than 15 per cent was never attained in any sample he has examined.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 123.

Kebler, L. F., asserts that no drug has given rise to more ill feeling than asafetida. He states that the alcohol soluble material in many on the part of the trade, because of the enforcement of the law, of the samples that have been brought to his attention varied from 10 to 30 per cent, while the ash content varied from 45 to 80 per cent.—Dental Cosmos, 1910, v. 52, p. 305.

LaWall and Bradshaw report finding 22.9 per cent ash in asafetida.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Caesar & Loretz (Jahres-Ber. 1910, p. 8) report that asafetida in tears contains not exceeding 6 per cent of ash.

Rusby, H. H., reiterates the statement that, when there is so little as 50 per cent of alcohol soluble matter in asafetida, there is certain to be from 20 to 30 per cent of ash, so that the present relative proportion of these substances must be very differently stated.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 168.

Pearson, W. A., discusses the difficulty of obtaining representative samples of gum asafetida, and reports a number of adulterations of samples in a given lot.—Proc. Pennsylvania Pharm. Ass. 1910, pp. 223–225. See also J. Ind. & Eng. Chem. 1910, v. 2, pp. 421–423.

Beilstein, Christian, believes that the difficulty in obtaining a representative sample from a shipment of asafetida is responsible for much of the variation in the results of analysis.—Proc. N. W. D. A. 1910, p. 106.

Wiley, H. W., reports that asafetida, although there has been a considerable improvement, is still, as a rule, of poor quality. Of 45 shipments examined, more than half did not come up to the U. S. P. standards.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

Umney and Bunker report a further study of asafetida and experiments to determine the nature and content of essential oil in the different varieties of asafetida.—Year-Book of Pharmacy, 1910, pp. 418–428. See also Pharm. J. 1910, v. 31 (85), pp. 147–149. For discussion see p. 177.

An editorial (Chem. & Drug. 1910, v. 76, p. 618) comments somewhat caustically upon recent rejections of asafetida importations at New York, and the alleged opinions thereon of H. H. Rusby as given in the New York Times. Rusby, H. H., replies.—*Ibid.* p. 902.

Kebler, L. F., asserts that there has never been a sample of asafetida denied entrance to the United States that contained approximately 50 per cent of alcohol soluble material. Samples have been offered that ran as low as 6 per cent alcohol soluble matter and about 85 per cent of ash. In other words, just stones perfumed with asafetida.—Proc. Maryland Pharm. Ass. 1910, p. 119.

Beal, George D., asserts that asafetida is still adulterated to a considerable extent; chalk, sand, and ground rock being frequently used.—Proc. Ohio Pharm. Ass. 1910, p. 72.

Bernegau, L. H., reports that only 5 out of 24 samples of asafetida came up to U. S. P. requirements, running from 62.83 to 69.5 per cent alcohol soluble material and 10.18 to 12.79 per cent ash. One sample assayed 15.39 per cent alcohol soluble material and 67.79 per cent ash. Six samples contained the required amount of alcohol soluble material but ran high in ash.—Proc. Pennsylvania Pharm. Ass. 1910, p. 135.

Patch, E. L., says that 5 lots of powdered asafetida varied from 41 to 66.5 per cent alcohol soluble; and from 22.5 to 36.5 per cent ash.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 741.

Beilstein, Christian, reports that 13 lots of asafetida were found to contain less than 50 per cent alcohol soluble material. The residue insoluble in alcohol varied from 52 to 74 per cent. Only 3 lots were found to meet the Pharmacopœial requirements for ash; the other lots varied from 19 to 52 per cent.—Proc. N. W. D. A. 1910, p. 106.

Eldred, Frank R., reports that 39 lots of powdered asafetida yielded from 16 to 64 per cent of ash, and from 18 to 61 per cent of alcohol soluble material. Twenty lots of crude, containing 50 per cent or more of alcohol-soluble material, yielded from 6 to 30 per cent ash, 9 of these lots yielded more than 19 per cent of ash.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 890–891.

Kebler, L. F., thinks the material offered as powdered asafetida is simply a travesty on justice. A large proportion of the valuable portion of the asafetida is volatilized in drying it. The material is just that much vitiated.—Proc. Maryland Pharm. Ass. 1910, p. 119.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 11) report that the gross adulteration of this gum resin, if anything, is becoming worse; in testing it is almost impossible to average the samples, some of which contain as much as 69 per cent of fairly large stones, etc., and a correspondingly low proportion of alcohol soluble resin. Only 1 sample, out of 13 examined, answered the stringent Ph. Brit. ash requirement.

Havenhill, L. D., outlines a modified formula for the tincture of asafetida.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 786.

Hommell, Philemon E., states that tincture of asafetida is rarely prescribed and should be eliminated.—Merck's Rep. 1910, v. 19, p. 122.

Osborne, Oliver T., would delete from the Pharmacopœia the tincture and perhaps the emulsion of asafetida.—J. Am. M. Ass. 1910, v. 54, p. 468.

Remington, Jos. P., declares that the mixture of asafetida was retained in the U. S. P. because of the assertion of one of the physicians of the Committee of Revision. He says this is an illustration of the fact that even otherwise up-to-date physicians at times appreciate the efficacy of old-time remedies.—*Ibid.* p. 397.

Schneider, Albert, describes the structural characteristics of aspidium, and states that it is adulterated with rhizomes of other ferns. The drug is readily attacked by insect parasites.—Merck's Rep. 1910, v. 19, p. 61.

The Committee of Reference in Pharmacy suggests an elaboration of the Ph. Brit. monograph to render the identification of filix mas more precise.—Brit. & Col. Drug. 1910, v. 58, p. 13.

Slosson, Margaret, describes one of the hybrids in *Dryopteris* closely related to *Dryopteris marginale*.—Bull. Torrey Bot. Club, 1910, v. 37, pp. 201–203.

Rusby, H. H., points out that the pharmacopœial definition of aspidium includes the rhizomes of *Dryopteris filix-mas* and *D. marginalis*, also that there is no evidence that the second named species should be included. He further states that large quantities of osmunda rhizomes are ground and sold for aspidium.—Drug. Circ. 1910, v. 54, p. 616.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 49), discussing the Ph. Germ. V requirements for aspidium, regret that this Pharmacopœia has not included an assay process for crude filicin.

Dohme and Engelhardt state that the Ph. Hung. III directs that aspidium should yield 8 per cent of extractive matter when exhausted with ether.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1184.

LaWall and Bradshaw report finding 2.57 per cent ash in male fern.—*Ibid*. p. 753.

Gane and Webster assert that aspidium is one of the most useful of drugs when carefully collected and preserved, but much of the commercial rhizome is inert and obtained from any old species of fern. It is falling into disuse on this account. More careful collection and preparation of the oleo-resin would undoubtedly restore its popularity as an anthelmintic.—Drug Topics, 1910, v. 25, p. 4.

Beal, George D., asserts that, in order to evade the requirements, male fern is marketed with all the chaff and other refuse as aspidium ''natural,'' a designation that does not occur in the U. S. P.—Proc. Ohio Pharm. Ass. 1910, p. 71.

Rusby, H. H., states that he has met with ground male fern containing not one particle of male fern, except the chaff and other inert matter which the Pharmacopœia directs should be rejected.—Practical Druggist, 1910, v. 27, p. 423.

Caesar & Loretz (Jahres-Ber. 1910, pp. 90–91) outline Fromme's method for determining the crude filicin in aspidium.

Dohme and Engelhardt state that the Ph. Hung. III directs that male fern be extracted with ether, which in their opinion is better than acetone, inasmuch as the latter is liable to extract substances which might produce injurious after effects.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1180.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, pp. 30–31, 49) regret that the Ph. Germ. V has not included an assay for oleoresin of aspidium. They think that crude filicin is a satisfactory indication of the value of this preparation.

Lascoff, J. Leon, calls attention to the danger of combining oleoresin of male fern and castor oil.—Am. Druggist, 1910, v. 57, p. 368.

An editorial (Lancet 1910, v. 178, p. 386) discusses the exhibition of liquid extract of male fern and the method of avoiding the inconveniences thereby entailed.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 178–179) reviews several communications on the use of liquid extract of filicis (oleoresin of aspidium) in the treatment of tapeworm.

See also J. Am. M. Ass. and Index Medicus.

ASPIDOSPERMINE.

Wood, H. C., jr., (Univ. Penn. Med. Bull., 23, 1–10) reports on some experiments with the following alkaloids of aspidosperma: aspidospermine, aspidosamine, quebrachine, and quebrachamine.—Chem. Abstr. 1910, v. 4, p. 2151.

ATROPINA.

Menge, George A., in a study of melting point determinations, reports on 3 samples of atropine, which were found to melt at from 114.1° to 115.1°, corrected.—Bull. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 87. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1042.

Eldred, Frank R., reports that 5 lots of atropine melted between 114.5° and 115.5°, only one lot had a melting point as low as 114°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 891.

Cohn, Georg, discusses the chemistry of the alkaloids of the atropine group and some of their derivatives.—Pharm. Zentralh. 1910, v. 51, pp. 368–373.

Elvove, Elias, in a report of further studies in the application of the Volhard method to the estimation of alkaloids, calls attention to the possibilities of applying this method for the determination of atropine.—J. Am. Chem. Soc. 1910, v. 32, p. 137.

Rosenthaler and Görner, in discussing the use of aromatic nitroderivatives as precipitants for alkaloids, point out that characteristic crystals were obtained with trinitrocresol.—Ztschr. anal. Chem. 1910, v. 49, p. 344.

Pohl, Julius, describes a method for the detection of atropine in the presence of physostigmine and pilocarpine.—Therap. Monatsh. 1910, v. 24, pp. 691–696.

Fuller, H. C., discusses the determination of cocaine and strychnine, and atropine and strychnine when they occur together.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 378–379.

An editorial note (Critic and Guide, 1910, v. 13, p. 173) states that atropine oleate is not a chemical compound; it is merely a solution of the alkaloid atropine in oleic acid; it is usually of 2 per cent strength and is used of course externally. It should be used with caution.

LaWall, Charles H., asserts that there should be a process of assay given under oleatum atropinæ, together with satisfactory tests for the identification of the separated alkaloid.—Am. J. Pharm. 1910, v. 82, p. 24.

Hart, T., presents a formula for atropine ointment for opthalmic use.—Pharm. J. 1910, v. 31 (85), p. 727.

Cushny, Arthur R., discusses the action of atropine, pilocarpine and physostigmine on the uterus.—J. Physiol. Lond. 1910, v. 41, pp. 233–245.

Fleischmann, P., reports on atropine detoxication by means of blood.—Arch. exper. Path. u. Pharmakol. 1910, v. 62, pp. 518–526.

Auer, J., presents a third communication on the prophylactic action of atropine in immediate anaphylaxis of guinea pigs.—Am. J. Physiol. 1910, v. 26, pp. 439–452.

Henderson and Taylor find that atropine depresses the bronchial gland peripherally.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, p. 160.

Doyon contributes a further note on the action of atropine on the liver.—Compt. rend. Soc. Biol. 1910, v. 68, p. 294. See also p. 152 and Compt. rend. Acad. sc. 1910, v. 150, p. 348.

Cauvin, Ch. (Clin. opthalmol. February 10, 1910) reports 2 cases of idiosyncrasy to atropine.—Nouv. remèdes, 1910, v. 26, p. 407.

Brady, William, states that atropine acts in half an hour and is eliminated within 2 hours.—N. York M. J. 1910, v. 91, p. 210.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 118–120) points out that atropine has been repeatedly recommended for the relief of intestinal obstructions in paralytic ileus.

For additional references on the uses of atropine, see J. Am. M. Ass. and Index Medicus.

ATROPINÆ SULPHAS.

Eldred, Frank R., points out that the melting point of atropine sulphate is influenced by the rate of heating. Twenty lots examined had melting points from 186° to 191°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 891.

Riedel's Berichte (1910, p. xxvii) suggests determining the optical activity of atropine sulphate.

Osborne, Oliver T., asserts that there is no belladonna, stramonium, or hyoscyamus preparation that will act better in inhibiting perspiration than straight atropine sulphate.—J. Am. M. Ass. 1910, v. 54, p. 376.

AURANTII AMARI CORTEX.

Fichtenholz, A., quotes Tschirch as authority for the derivation of the word orange from the Sanscrit, *Nagaranga* or *Naranga*.—J. pharm. et chim. 1910, v. 2, p. ii.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 17) point out that the Ph. Germ. V directs that cortex aurantii be derived from *Citrus aurantium* Linné subspecies *amara* Linné. For the production of the powder, orange peel is to be dried over freshly calcined lime.

LaWall and Bradshaw report finding 3.1 per cent ash in bitter orange peel.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Havenhill, L. D., outlines a modified formula for tincture of bitter orange peel.—*Ibid.* p. 786.

AURANTII DULCIS CORTEX.

LaWall and Bradshaw report finding 3.35 and 3.75 per cent ash in sweet orange peel.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Havenhill, L. D., outlines a modified formula for tincture of sweet orange peel.—*Ibid.* p. 786.

Table showing some of the analytical results reported for tincture of orange.

Reporters.	Number of samples—		Reporters.
	Examined.	Rejected.	
Sayre, L. E.	1	1	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.
Potter, Hubert F.	2	2	Rep. Connecticut Dairy and Food Com., 1910, Hartford, 1911, p. 125.
Hudson, T. G.	7	3	Bull. Georgia Dept. Agric. 1910, No. 51, pp. 46–47.
Howard, C. D.	4	4	New Hampshire San. Bull. 1910, v. 3, pp. 155, 176.
Brown, Lucius P.	2	2	Bull. No. 3, Tennessee Food and Drugs Insp. 1910, p. 20.

AURI ET SODII CHLORIDUM.

Murray, B. L., points out that the U. S. P. peroxide method for assay of gold and sodium chloride generally yields low results, and even at best it is not a method to be recommended for use by miscellaneous workers. He describes and recommends the electrolytic method for the assay of gold and sodium chloride.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 965–966.

Rössler, L., presents a contribution on the estimation of gold by means of hydrogen dioxide.—Ztschr. anal. Chem. 1910, v. 49, pp. 739–740.

Gane and Webster assert that the physiological effects of gold and sodium chloride are shrouded in mystery. It was used to some extent by some of our prominent neurologists, but was soon abandoned by them, and since that time it has been kept alive by the popular belief that it is the, or one of the, main ingredients in the "Keeley Cure." It would not be missed from the U. S. P.—Drug Topics, 1910, v. 25, p. 4.

BALSAMUM PERUVIANUM.

Gane and Webster assert that balsam of Peru is misbranded under the Food and Drugs Act, not coming from Peru.—Drug Topics, 1910, v. 25, p. 4.

Kebler, L. F., expresses the belief that where it is definitely established, as in the case of balsam of Peru, that the title is a misnomer the name should go.—Proc. Maryland Pharm. Ass. 1910, p. 125.

An unsigned article discusses the origin and production of balsam of Peru.—Pharm. Zentralh. 1910, v. 51, p. 413.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 13) point out that the Ph. Germ. now requires a minimum of 56 per cent cinnamein in balsam of Peru and permits a variation of from 1.145 to 1.158 in the specific gravity of this drug. The saponification number is to be at least 224.6 and the saponification number of the contained cinnamein at least 235. They regret that the new Pharmacopœia has not included the nitric acid test for balsam of Peru.

Hartwich, C., thinks that the cinnamein content (56 per cent) for balsam of Peru could readily have been increased. He also thinks that the method for determining the saponification number should have been given in greater detail.—Apoth. Ztg., 1910, v. 25, p. 1035.

Dohme and Engelhardt state that the Ph. Hung. III requires 56 per cent of cinnamein for balsam of Peru.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1173.

Rusby, H. H., states that at present no one is able to take a sample of balsam of Peru and say whether it is adulterated, because there is not a single specimen available with such perfect record of collection and preservation as absolutely to prove its purity.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 810.

Kebler, L. F., asserts that the subject of detecting imitation balsam of Peru is a very interesting one and that even the expert fails at times to detect it.—Proc. Maryland Pharm. Ass. 1910, p. 126.

Beilstein, Christian, asserts that balsam of Peru has been an extremely troublesome article because of the persistent competition of the artificial product or substances containing it, which are marked with a guaranty that the article offered "answers all the tests."—Proc. N. W. D. A. 1910, p. 99.

Woolsey, J. F., says that the similarity of the artificial to the natural balsams is so marked that at this time no satisfactory tests are available to distinguish the two.—Proc. Pennsylvania Pharm. Ass., 1910, p. 135.

Wiley, H. W., reports that a very close imitation of the natural balsam of Peru has been offered, but the majority is brought in for technical use only.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

Kebler, L. F., asserts that not a single sample of balsam of Peru has been held up or delayed except the imitation product which he believes to be an undesirable article.—Proc. Maryland Pharm. Ass., 1910, p. 116.

Lenz, W., discusses artificial balsam of Peru and presents an opinion on the validity of the German patent on this product.—Arb. pharm. Inst. Univ. Berl. (1910), 1911, v. 8, pp. 268–275.

Seil, H. A., suggests the adoption of a test for the synthetic balsam of Peru.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 83.

Tschirch and Werdmüller report the examination of several samples of Honduras balsam.—Arch. d. Pharm., 1910, v. 248, pp. 420–430.

The same authors present a note on Cabureiba balsam. This balsam has been designated by Guibourt as brown or red balsam of Peru but examination failed to show the presence of cinnamein.—*Ibid.* pp. 431–432.

Riedel's Berichte (1910, p. xxvii) states that the balsam of Peru imported at the present time frequently has a specific gravity higher than the upper limit provided by the Ph. Germ. and suggests that a specific gravity of 1.160 be permitted.

Caeser & Loretz (Jahres-Ber., 1910, pp. 78–79) review the requirements for specific gravity included in various pharmacopœias, and as a result of their experience suggest a limit from 1.145 to 1.158 at 15°. The sulphuric acid test they believe to be unreliable and superfluous. They outline a method for applying the nitric acid test, which in their hands has proven to be satisfactory.—See also *Ibid.* p. 9.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 15) report that 2 samples of Peruvian balsam examined gave quite satisfactory results: specific gravity 1.1442 and 1.1560; ether residue (from 5 gm.) 2.87 and 2.93 gm.; saponification value of this 222.8 and 237.5.

Patch, E. L., reports assays of two samples of balsam of Peru: sp. gr., 1.146; cinnamein, 61.6 per cent; acid resin required 2.25 seminormal potassa solution; specific gravity, 1.145; cinnamein, 58 per cent; acid resin, 2.20.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 742.

BALSAMUM TOLUTANUM.

Dohme and Engelhardt state that in the Ph. Hung. III requirements for balsam of tolu, the acid and saponification numbers are omitted.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1173.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 14) point out that the Ph. Germ. V permits a variation of from 112.3 to 168.5 in the acid number and from 154.4 to 190.9 in the saponification number of balsam of tolu.

Hartwich, C., comments on the Ph. Germ. V monograph for balsam of tolu and points out that the relation between the saponification number and the acid number should be distinctly indicated.—Apoth. Ztg., 1910, v. 25, p. 1035.

Gane and Webster assert that the solubility of balsam of tolu in carbon disulphide is important in detecting some of the commoner adulterants. A limit of solubility in this liquid might well be adopted and a method for determining the percentage of cinnamic acid in the balsam. This would be preferable to the "limit of acidity" now official.—Drug Topics, 1910, v. 25, p. 4.

Wiley, H. W., reports that tolu continues to be of excellent quality.—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 470.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 76) report that 6 samples of tolu balsam have on assay yielded free acid, as benzoic, 7.26 to 12.7 per cent; combined acid, as benzoic, 18.2 to 26.6 per cent. One sample submitted was rather dirty.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 17) report that 4 samples of balsam of tolu have given satisfactory results, the variation being much less marked than in the case of storax; 80.0 to 86.2 per cent, average 83.4 per cent, was soluble in 90 per cent alcohol; 0.66 to 2.54 per cent, average 1.71 per cent, was insoluble in 90 per cent alcohol; 7.87 to 10.77 per cent, average 9.64 per cent, was free balsamic acid as benzoic; and 17.32 to 25.61 per cent, average 20.07 per cent, was combined balsamic acid as benzoic.

Havenhill, L. D., outlines a formula for the tincture of tolu.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 791.

The members of the New England Branch of the A. Ph. A. think that a soluble tincture for the preparation of sirup of tolu would be desirable.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 150.

Beringer, George M., states that several of the foreign pharmacopœias direct that sirup of tolu be prepared from the balsam infused with water, and sugar added to the filtered infusion.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1245.

Henrard, Louis, commends the Ph. Fr. V sirup of tolu but thinks it may be improved by using hot lixiviation and that the merits of his methods are worthy of consideration.—An. pharm. Louvain, 1910, v. 16, pp. 193–196.

Meyer, Charles E., outlines a new, novel and original process for making sirup of tolu.—Proc. Missouri Pharm. Ass., 1910, p. 94.

BELLADONNÆ FOLIA.

An editorial (Pacific Pharmacist, 1909–10, v. 4, p. 295) calls attention to belladonna culture in California, and reports that the alkaloidal content of stems is equal to that of the leaves, ranging from 0.51 per cent to 0.82 of total alkaloids. The average yield per acre (stems and leaves) is somewhat less than one ton.

Perrédès, P. E. F., reports observations on and illustrates an insect pest in belladonna.—Year-Book of Pharmacy, 1910, pp. 410–417. Also Pharm. J. 1910, v. 31 (85), pp. 135–137. For discussion see p. 176.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5, [1910], 1911, p. 33) point out that the Ph. Germ. V requires that belladonna contain at least 0.3 per cent of hyoscyamine, and prescribes an assay process which is said to yield satisfactory results. The ash content is not to exceed 15 per cent.

Dohme and Engelhardt state that the Ph. Hung. III does not give an assay process for belladonna leaves. The only requirement is that the leaves should give by percolation with dilute alcohol 15 per cent of extractive matter.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1173.

Rusby, H. H., asserts that the quality of belladonna is greatly improved. The usual assay is around 0.5 per cent. The addition of scopola leaves still continues. The upper portion of the belladonna stem, not exceeding 0.25 inch in thickness, is quite as rich in alkaloid as the leaves.—*Ibid.* p. 741.

LaWall and Bradshaw report finding from 11.0 to 15.2 per cent ash in belladonna leaves.—*Ibid.* p. 751.

Reum, Arthur W., reports that in commercial belladonna one may expect to find approximately 85 per cent of leaves, 7 per cent of stems and 8 per cent of fruit, etc.—Pacific Pharmacist, 1909–10, v. 4, p. 456.

Rusby, H. H., thinks that the portion of "top" permissible in belladonna leaves should be specified as not exceeding 6 inches in length.—Drug. Circ., 1910, v. 54, p. 617. Also Practical Druggist, 1910, v. 27, p. 424.

Sayre, L. E., reports the examination of belladonna leaves and herb as grown in California. He recommends that the belladonna leaf of the U. S. P. VIII be replaced by belladonna herb in the U. S. P. IX.—Pacific Pharmacist, 1909–10, v. 4, pp. 332–333.

Chevalier, J., discusses the influence of cultivation on the alkaloidal content of some of the Solanaceæ. With belladonna he secured an average alkaloidal content of 0.5104 per cent for the dry leaves, as compared with Austrian 0.251 to 0.372, Italian 0.107 to 0.187, and French 0.300 to 0.450.—Compt. rend. Acad. sc. 1910, v. 150, pp. 344–346. See also Chem. & Drug. 1910, v. 76, pp. 357, 397.

Gane and Webster report that despite the reduction in the official standard it is not always possible to obtain belladonna leaves containing as much as 0.30 per cent of alkaloid. This is largely due to the fact that commercial consignments often consist of the whole plant and also to collection at a time when the plant is not in flower, the alkaloidal content being highest at that period.—Drug Topics, 1910, v. 25, p. 4.

Clark, Albert H., thinks the standard of 0.35 per cent alkaloids in belladonna leaf originally adopted in the Pharmacopœia seems to have been widely reduced to 0.30 per cent. Only one sample examined met the requirement of 0.35 per cent, but all of them were 0.30 per cent or better.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 123.

Thaysen, Holger, presents a paper on the estimation of alkaloids in leaves and extract of belladonna, with tabulated results by different methods.—Arch. Pharm. og Chem. 1910, v. 17, pp. 17–21, 26–32.

Sievers, A. F., presents some practical suggestions on the assay of mydriatic alkaloids, the precautions that are to be observed, and discusses methods for avoiding difficulties frequently encountered.—Merck's Rep., 1910, v. 19, p. 215.

Lyons, A. B., discusses the progress in the standardization of mydriatic drugs, reviews the extent to which standards of this type have been included in foreign pharmacopœias and calls attention to the results of co-operative study of assay processes of belladonna by the Association of Official Agricultural Chemists.—Am. Druggist, 1910, v. 56, p. 6.

Hoover, G. W., points out that a review of the co-operative work done in connection with the assay of drugs shows a variation by the pharmacopœial method of 20 per cent of alkaloid in belladonna leaves and for the same drug by an aliquot part method, 10 per cent of alkaloid based on the amount present as 100 per cent.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 182 (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Kebler, Lyman F., in a review of the present status of drug assays, points out that in the case of belladonna leaves the variation is as high as 35 per cent, a range which is entirely too great.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 858.

Scoville, W. L., thinks that the U. S. P. method of assay for belladonna is satisfactory, when Mayer's reagent is carefully used to insure complete extraction.—*Ibid.* p. 820.

Thome, E. R., suggests a modification in the method of assay for extract of belladonna leaves.—Practical Druggist, 1910, v. 28, p. 122.

Lyons, A. B., reports a comparison of the requirements and methods of assay for belladonna leaves included in the Ph. Helv. and the U. S. P.—Am. Druggist, N. Y., 1910, v. 56, p. 102.

Caesar & Loretz (Jahres-Ber., 1910, pp. 93–95) outline the Keller method of assay for belladonna and call attention to the requirements made by the several pharmacopœias.

Table showing reported variations in alkaloidal content of belladonna leaf.

Reporter.	Number of samples.	Per cent of mydriatic alkaloids.		References.
		Minimum.	Maximum.	
Clark, A. H	(?)	0.3	0.35	Proc. Am. Pharm. Ass. 1910, v. 58, p. 741.
Eldred, Frank R. (1908)	21	0.23	0.62	*Ibid.* p. 891.
Eldred, Frank R. (1909)	23	0.18	0.54	*Ibid.* p. 891.
Gane, E. H	5	0.2	0.4	*Ibid.* p. 742.
Goeckel, Henry J	6	0.2416	0.532	*Ibid.* p. 1048.
Patch, E. L	(?)	0.26	0.27	*Ibid.* p. 741.
Vanderkleed, Chas. E	24	0.207	0.680	Proc. Pennsylvania Pharm. Ass., 1910 p. 147.

Engelhardt, Hermann, reports that 31 samples out of 34 showed an alkaloidal strength higher than required by the U. S. P.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1256–57.

Bernegau, L. H., says that one bale of belladonna leaves assayed only 0.0257 per cent alkaloids, and it was found to consist principally of chestnut leaves.—Proc. Pennsylvania Pharm. Ass., 1910, p. 135.

Beilstein, Christian, reports that 6 lots of belladonna leaves contained varying amounts of scopola leaves. Four lots were found to assay less than the official standard of 0.3 per cent.—Proc. N. W. D. A. 1910, p. 104.

Rusby, H. H., states that he has met with belladonna leaves consisting of fully half their bulk of scopola leaves, these two leaves having been collected at a point hundreds of miles distant from where the other grew.—Practical Druggist, 1910, v. 27, p. 423.

Wiley, H. W., reports that belladonna leaves have improved very much in quality. From about 60 shipments examined, less than 10 per cent have been deficient in assay. Of these about one half contained scopola leaves.—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 470.

Beal, George D., states that belladonna leaves show their full amount of alkaloid in practically all cases, though there is a frequent addition of scopola.—Proc. Ohio Pharm. Ass., 1910, p. 72.

Kebler, L. F., asserts that belladonna leaves are frequently adulterated and points out that it is practically impossible to garble this drug.—Proc. Maryland Pharm. Ass. 1910, p. 116.

Beilstein, Christian, reports belladonna leaves as containing scopola leaves.—Proc. N. W. D. A. 1910, p. 99.

Francis, J. M., states that the adulteration of belladonna leaves with the leaves of stramonium and similar plants is still practiced to a certain extent, and he was forced within the last few months to burn up a shipment of belladonna leaves because of its containing about 60 per cent of stramonium leaves.—Proc. Pennsylvania Pharm. Ass., 1910, p. 136.

Schneider, Albert, states that Belladonna is frequently adulterated with phytolacca, scopola, and other foreign leaves.—Merck's Rep., 1910, v. 19, p. 62.

Javillier discusses atropine assay and the determination of the alkaloids in extracts of belladonna.—Bull. sc. pharmacol. 1910, v. 17, pp. 629–634.

Dohme and Engelhardt state that the Ph. Hung. III directs that the extract of belladonna be made by percolation with diluted alcohol in the regular way.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1178.

Gane, E. H., thinks that the strength of extract of belladonna leaves should be reduced to 1.2 per cent, in conformity with the reduction in the standard for the leaves.—Drug Topics, 1910, v. 25, p. 228.

Sayre, L. E., reports on 1 sample of belladonna extract pills: illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1095.

Gathercoal, E. N., reports observations on the microscopical examination of belladonna extract and the possibility of determining the nature of this extract in this way.—*Ibid.* pp. 898–902.

The London Correspondent (J. Am. M. Ass., 1910, v. 55, p. 789) notes from the Committee of Reference in Pharmacy that on account of being easier to make, and being free from objectionable color, a plaster made with atropine sulphate is to be substituted for emplastrum belladonnæ.

Clark, A. H., criticises the U. S. P. assay for belladonna plaster and presents some suggestions on the assay method of extract of belladonna.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 852–855.

Kilmer, Frederick B., states that the U. S. P. VIII method of assay for belladonna plaster with some slight modifications is entirely satisfactory.—Am. J. Pharm. 1910, v. 82, p. 113.

Mains, S. L., reports that, of 6 samples of tincture of belladonna examined, 4 were below standard.—Proc. Nebraska Pharm. Ass., 1910, p. 51.

Havenhill, L. D., outlines a modified formula for making tincture of belladonna leaves.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 786.

Sayre, L. E., reports on 2 samples of belladonna leaf tincture: 1 passed; 1 illegal.—*Ibid.* p. 1095.

Hommell, Philemon E., thinks that the precipitate found in tincture of belladonna leaves should be avoided.—Merck's Rep., 1910, v. 19, p. 122.

Dohme and Engelhardt state that the Ph. Hung. III directs that the tincture of belladonna should contain 2.5 per cent of extractive matter.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1192.

Pollard, J. W., reports examining 10 samples of tincture of belladonna. The extractive varied from 1.05 to 3.76 per cent and the per cent of alcohol from 26.4 to 47.5.—Proc. Massachusetts Pharm. Ass., 1910, p. 160.

Barnard, H. E., reports the assay of 13 samples of tincture of belladonna leaves; 6 were U. S. P. or above and 7, or 53 per cent of the total samples, were below U. S. P. standard. Highest, 0.35 gm. mydriatic alkaloid per 100 cc.; lowest, 0.198 gm. mydriatic alkaloid per 100 cc.—Proc. Indiana Pharm. Ass., 1910, p. 56.

Koch, William J., asserts that in belladonna ointment an ointment base consisting of 1 part of hydrous wool-fat, and 3 parts of petrolatum will make a nice smooth, absorbent ointment.—Am. Druggist, 1910, v. 56, p. 239.

Mittelbach, Wm., thinks that the omission of benzoinated lard from the formula for belladonna ointment would be an improvement.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 793.

Members of the Denver Branch of the A. Ph. A. suggest placing the extract with the dilute alcohol in a covered vessel on a water bath for a few minutes, or until dissolved, and then proceeding as usual. By this method the extract softens and dissolves quickly.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 166.

An editorial (Lancet, 1910, v. 179, p. 575), commenting on the relation of rate of elimination to maximum daily dose, remarks that belladonna rarely produces fatal results owing to the rapidity with which it is eliminated.

Short and Salisbury describe the results of a series of observations on the action of cutaneous anæsthetics, and remark that it is surprising that belladonna should still have such a reputation as a local analgesic.—Brit. M. J., 1910, v. 1, p. 561. See also p. 1521 for an adverse opinion.

Davies, L. Gwillim, reports the successful use of belladonna in the treatment of acute œdema of the lungs. He injected 20 minims of a glycerinated tincture without untoward results.—*Ibid.* 1910, v. 2, p. 257.

Yeager, Wm. H., believes belladonna to be one of the most valuable remedies we possess for the treatment of children suffering with one of the more serious forms of diarrhœa.—Hahnemann. Month., 1910, v. 45, p. 369.

Monroe, A. Leight, quotes Walter Joel Brown who recommends belladonna in the treatment of acne with large, bright, red pimples on the face, back and scapulæ, especially in young, full fledged people.—*Ibid.* p. 716.

Fornias, E., quotes Wassily who points out that belladonna acts chiefly on the venous system, hence the remedy for passive inflammations.—*Ibid.* p. 551.

BELLADONNÆ RADIX.

Schneider, Albert, describes the structural characteristics of belladonna root, and states that the drug is frequently adulterated with old roots (woody tissue excessive), scopola, phytolacca, alfalfa, or other roots.—Merck's Rep., 1910, v. 19, p. 62.

Rusby, H. H., asserts that in the case of belladonna root, we need a histological characteristic to provide for the detection in it, when powdered, of scopola.—Drug. Circ., 1910, v. 54, p. 618.

Brown, Linwood A., points out that belladonna root is very apt to be attacked by insects, unless closely watched.—Bull. 150, Ky. Agric. Exper. Sta., 1910, p. 131.

Kebler, L. F., asserts that belladonna root was one of the most liberally adulterated drugs when the work of enforcing the food and drugs law began. Virtually every consignment was held up. One importer was allowed to garble a certain consignment but by the time he got through he found that it was such a terribly undesirable job that he did not want to tackle it again.—Proc. Maryland Pharm. Ass. 1910, p. 115.

Beal, George D., reports that the quality of belladonna root is usually good, scarcely any poke root being found in it at the present time. He quotes, from the report of Evans Sons Lescher & Webb, the statement that much foreign root is spoiled by lack of care in drying.—Proc. Ohio Pharm. Ass., 1910, p. 72.

Rusby, H. H., states that the presence of poke root in belladonna root has practically ceased, and it has been gradually improved in character from every point of view.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 741.

Wiley, H. W., reports that about 20 shipments of belladonna root were examined, 3 of which contained poke root, and were decidedly deficient in alkaloid. Some large shipments, however, averaging 50 bales, equalled or exceeded the pharmacopœial requirement as to alkaloid content.—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 470.

Hoover, G. W., points out that a review of the co-operative work done in connection with the assay of drugs shows a variation, by the pharmacopœial method, of 15 per cent of alkaloid in belladonna root and for the same drug, by an aliquot part method, 5 per cent of alkaloid based on the amount present as 100 per cent.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 182. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Caesar & Loretz (Jahres-Ber., 1910, pp. 103–104) describe the Keller method of assay for belladonna root and point out that the Ph. Helv. IV requires that this drug contain 0.4 per cent, while the U. S. P. VIII requires that it contain 0.3 per cent of alkaloid.

Lyons, A. B., reports a comparison of the requirements and methods of assay for belladonna root included in the Ph. Helv. and the U. S. P.—Am. Druggist, N. Y., 1910, v. 56, p. 102.

Gane and Webster assert that the assay process for belladonna root carefully carried out yields quite concordant results.—Drug Topics, 1910, v. 25, p. 4.

Table showing reported variations in the alkaloidal content of belladonna root.

Reporter.	Number of samples.	Per cent of mydriatic alkaloids.		References.
		Minimum.	Maximum.	
Clark, Albert H	1	0.45	....	Bull. Am. Pharm. Ass. 1910, v. 5, p. 123.
Engelhardt, Hermann	36	0.14	0.5+	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1256.
Eldred, Frank R. (1908)	6	0.18	0.52	*Ibid.* p. 891.
Eldred, Frank R. (1909)	8	0.37	0.57	*Ibid.* p. 891.
Goeckel, Henry J	1	....	0.534	*Ibid.* p. 1048.
Patch, E. L	3	0.44	0.49	*Ibid.* p. 742.
Vanderkleed, Chas. E	10	0.373	0.660	Proc. Pennsylvania Pharm. Ass., 1910 p. 147.
Caesar & Loretz	?	0.320	0.645	Jahres-Ber., 1910, p. 44.
Evans Sons Lescher & Webb.	6	0.4	0.70	Analytical Notes, 1910, p. 14.
Southall Bros. & Barclay	4	0.39	0.47	Rep. 1910, Birmingham, 1911, p. 6.

Francis, J. M., has seen several lots of belladonna root adulterated with a drug of similar physical appearance.—Proc. Pennsylvania Pharm. Ass., p. 136.

Beilstein, Christian, reports belladonna root as containing poke root.—Proc. N. W. D. A. 1910, p. 99.

Thome, E. R., thinks that the present standard of 0.45 per cent mydriatic alkaloids is too low to obtain a fluid extract of 0.4 per cent. He advises substituting cochineal T. S. in the assay process where hematoxylin T. S. is indicated.—Practical Druggist, 1910, v. 28, p. 122.

Sayre, L. E., reports 7 samples of fluid extract of belladonna: all illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1095.

The Committee of Reference in Pharmacy submits a monograph for extractum belladonnæ liquidum, to replace the one now included in the Ph. Brit. The alkaloidal content of the preparation is given as 0.75 gm. of the alkaloids of belladonna root in 100 cc.—Brit. & Col. Drug., Lond., 1910, v. 58, p. 12.

BENZALDEHYDUM.

Breves, Rudolph, thinks that benzaldehyde produced artificially should be dropped from the Pharmacopœia, as the official preparations requires the presence of prussic acid which is found only in the natural product.—Practical Druggist, 1910, v. 28, p. 39.

Mittelbach, Wm., thinks that benzaldehyde looks too much like a substitute preparation and ought not to be retained in the U. S. P.—Proc. Missouri Pharm. Ass., 1910, p. 98.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 7) report the figures for 6 samples of benzaldehyde varying between narrow limits; specific gravity, 1.047 to 1.051; refractive index, 1.5430 to 1.5450; soluble in 1 to 2 volumes of 70 per cent alcohol.

Anselmino, O., points out that benzaldehyde was introduced into the Ph. Germ. V as a flavoring for emulsions and other pharmaceutical preparations where hydrocyanic acid would be objectionable.—Ber. d. pharm. Gesellsch., 1910, v. 20, p. 542.

Brown, Linwood A., states that benzaldehyde greedily absorbs oxygen from the air, forming a precipitate of benzoic acid in the bottle, and, unless tightly stoppered, the entire contents of the bottle, will soon become solid.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 136.

Murray, B. L., thinks that the specific gravity of benzaldehyde is not stated correctly in the U. S. P.—Am. Druggist, 1910, v. 57, p. 384.

Pope and Howard report observations on the condensation of benzaldehyde with resorcinol.—J. Chem. Soc., Lond., 1910, v. 97, pp. 78–83.

BENZINUM.

An editorial note (Pharm. Zentralh., 1910, v. 51, p. 1) discusses the nomenclature of petroleum benzin and the nature of the product that is being sold in Germany as petroleum ether.

Oldberg, Oscar, thinks that such a crude title as "æther petrolei" should no longer be employed for a hydrocarbon.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 759.

The Budapest Correspondent (Lancet 1910, v. 178, p. 961) notes that benzin is indispensable in surgical practice and has been added to the Ph. Hung. III.

Dohme and Engelhardt state that the Ph. Hung. III directs that petroleum benzin have a specific gravity of from 0.700 to 0.717.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1173.

Gane and Webster assert that there is no necessity for including the crude product benzin in the Pharmacopœia. The two monographs should be combined and physical constants and tests given for the purified product only. Now that the U. S. P. is a legal standard, it would seem advisable to eliminate, as far as possible, products not used for medicinal purposes.—Drug Topics, 1910, v. 25, p. 5.

Beringer, George M., states that the chemical manufacturers have taken up the subject of purified benzin and that it has now become a commercial article.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1246.

Barrier, Edw. A., reports a number of flash, fire and explosion tests on mixtures of carbon tetrachloride and naptha, and concludes that a certain percentage of naphtha, varying with the gravity of the naphtha, can be added to carbon tetrachloride and still leave the mixture free from fire and explosion hazard.—J. Ind. & Eng. Chem., 1910, v. 2, pp. 16–19.

An unsigned article reports a number of accidents and fatalities from petroleum benzin.—Pharm. Zentralh. 1910, v. 51, p. 598.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, p. 123) points out that benzin in combination with iodine has been recently suggested for disinfecting the skin before operations.

BENZINUM PURIFICATUM.

Mittelbach, William, asserts that benzinum purificatum should be implied when benzinum is used.—Proc. Missouri Pharm. Ass. 1910, p. 98.

BENZOINUM.

Rordorf, Hart., discusses the origin of Siam benzoin.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 549–553.

Holmes, E. M., presents some notes on Siam benzoin, referring particularly to the recent contribution of Hartman Rordorf.—Pharm. J. 1910, v. 31 (85), p. 515.

Parry, Ernest J., describes Siam, Sumatra and Penang benzoin; also discusses the chemical examination of this product and reports the results of a number of analyses of typical samples of authentic origin. The amount of material insoluble in alcohol was found to range from 3.9 to 16.8 per cent; acid value from 94 to 152; and the ester value from 38 to 69.—Am. Perf. 1910–11, v. 5, pp. 56–57.

An editorial (Chem. & Drug. 1910, v. 77, p. 795) discusses the high price of benzoin and the effect of the restrictions made by the Ph. Fr. V and U. S. P. VIII as to this product.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5, [1910], 1911, p. 14) point out that the Ph. Germ. V restricts benzoin to the Siam variety obtained, from a species of *Styrax*. The external color is given as yellowish-white, brownish-red or yellowish-brown and the internal fracture surface as whitish.

Dohme and Engelhardt state that the Ph. Hung. III directs that not more than 10 per cent of benzoin be insoluble in warm alcohol.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1173.

Muhlhan, O. E., thinks it difficult to obtain benzoin of pharmacopœial strength.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 149.

Gane and Webster think that an average of 20 per cent alcohol insoluble is not excessive, and the U. S. P. limit might be placed at not under 80 per cent alcohol soluble matter. If a higher percentage is deemed necessary, the official benzoin should be confined to the Siam variety. If present limit is decreased, the ash limit must be raised slightly to correspond.—Drug Topics, 1910, v. 25, p. 5.

Rusby, H. H., asserts that benzoin is very prone to contain excessive amounts of wood and bark tissue and other impurities. He does not think it practicable to exclude all of this contamination and suggests that the increase of the normal amount be checked by specifying the allowable limit of insoluble matter.—Drug. Circ., 1910, v. 54, p. 618.

Wiley, H. W., reports that, of 21 shipments of benzoin entered, practically all complied with the 15 per cent insoluble standard. Several, however, were entered for "technical purposes only", and declared 25 per cent insoluble in alcohol.—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 470.

Table showing reported variations in alcohol soluble matter found in samples of benzoin.

Reporter.	Number of samples.	Per cent of alcohol soluble matter.		References.
		Minimum.	Maximum.	
Bernegau, L. H	11	74.66	90.49	Proc. Pennsylvania Pharm. Ass., p. 136.
Eldred, Frank R	44	65.	91.	Proc. Am. Pharm. Ass., 1910, v. 58, p. 891.
Gane, E. H	2	92.65	93.65	*Ibid.* p. 742.
Scoville, W. L	?	74.5	87.5	*Ibid.* p. 742.
Evans Sons Lescher & Webb.	4	81.25	97.8	Analytical Notes, 1910, p. 14.

Havenhill, L. D., outlines modified formulas for tincture of benzoin and for compound tincture of benzoin.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 786.

Beringer, George M., thinks that trituration of benzoin in making the tincture is not practical, and asks why this should be done in benzoin and not in tincture of aloes, etc. He states that maceration in suitable container with frequent agitation is sufficient in this as in others.—*Ibid.* p. 782.

McCarthy, Harold H., considers a standard of 18.0 gm. of solids per 100 cc. of compound tincture of benzoin excessive, and shows that 4 samples of English origin varied between 15.8 and 17.1, while a German sample gave but 14.4.—Chem. & Drug. 1910, v. 76, p. 30.

BENZOSULPHINIDUM.

Menge, George A., in a study of melting point determinations, reports that the melting point behavior of 7 samples of saccharin was found to be extremely unsatisfactory. He concludes that corrections would doubtless be in the neighborhood of 4° and 5° for the thermometer used, which would make the corrected readings about 225°–227° to 212°–225°.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, p. 88.

Eldred, Frank R., reports that the melting point of twenty lots of saccharin varied from 217° to 220.5°. Three lots melted at 217°, four at 218°, eleven at 219° and one lot at 220.5 degrees.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 891.

Dohme and Engelhardt outline the Ph. Hung. III test for the purity of benzosulphinide.—*Ibid.* p. 1191.

Tortelli and Piazza discuss the detection and quantitative estimation of saccharin in fat, starch and albumen containing materials.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 20, pp. 489–494. See also Ann. Falsif. 1910, v. 3, pp. 313–320.

Naito, T., reports a number of experiments to determine the practicability of estimating saccharin by means of the sulphurous acid, liberated on fusing with alkalies.—J. Pharm. Soc. Japan., 1910, p. 505.

Morisaki, Ch., reports observations on the detection of saccharin according to the method proposed by Schmidt, and bases his endorsement of the utility of the method on a number of experiments.—*Ibid.* p. 144.

Scoville, W. L., reports that saccharin varies in tests from 425 to 550 times as sweet as sugar.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 746.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 29) report that a sample of saccharin, reputedly "550," yielded 4.85 per cent of ash on ignition, the ash consisting of sodium sulphate. They are unable to account for this impurity except by admixture of "Soluble Saccharin," since the sodium compound itself should yield a much higher proportion of sodium sulphate.

The Committee on Adulterations reports finding samples of saccharin which showed the presence of sodium bicarbonate to the extent of 20 per cent, evidently added to render the saccharin more soluble.—Proc. New York Pharm. Ass., 1910, p. 170. See also D.-A. Apoth. Ztg., 1910–11, v. 31, p. 58.

Diehl, C. Lewis, reports that the use of saccharin is to be discouraged and permitted in N. F. formulas only where absolutely necessary.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 525.

Kebler, Lyman F., reports the opinion that the use of saccharin as a sweetening agent in National Formulary products is uncalled for and should be discouraged.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 146. See also p. 210.

BERBERIS.

Gane and Webster note that although there is a great deal of berberis collected, there is little demand for preparations of it. By far the greater part is used by proprietary medicine manufacturers or by makers of berberine. Its medicinal virtues lie wholly in the berberine it contains, and this alkaloid can with advantage replace the drug and its preparations.—Drug Topics, 1910, v. 25, p. 5.

Rusby, H. H., calls attention to species now included under the title "Berberis," and points out that, inasmuch as the activity depends chiefly upon the alkaloid berberine, it should be comparatively easy to conduct a series of assay experiments sufficient to rule out the less valuable species.—Drug. Circ., 1910, v. 54, p. 616.

Rosenthaler and Görner, in discussing the use of aromatic nitro derivatives as precipitants for alkaloids, state that m- and p-nitrophenol and also tetranitrophenolphthalein are more sensitive to berberine than is picric acid. A characteristic precipitate is afforded by dinitro-a-sulphonic acid.—Ztschr. anal. Chem. 1910, v. 49, p. 344.

Frerichs, G., presents a contribution to our knowledge of berberine in which he discusses the chemistry of berberrubin.—Arch. d. Pharm., 1910, v. 248, pp. 276–284.

Faltis, Franz, reports observations on the constitution of berberine and some of its derivatives.—Monatsh. Chem., 1910, v. 31, pp. 557–581.

Gadamer, J., reports a study of the chemistry of dihydroberberine. —Arch. d. Pharm., 1910, v. 248, pp. 670–681.

Osborne, Oliver T., thinks that berberis and its fluid extract are not needed in the Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 209.

Ellingwood, Finley, calls attention to the stimulating and tonic influence of berberis aquefolium upon the skin and glandular structures. He asserts that it certainly is an excellent alterative, especially when the excretion of morbific products through the skin produces the various forms of scaly and pustular skin diseases.—Nat. Eclec. M. Ass. Quart., 1910, v. 1, p. 159.

BETANAPHTHOL.

Menge, George A., in a study of melting point determinations, reports on 8 samples of betanaphthol which were found to fuse completely at from 121.2°–121.8° corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.—H. S., 1910, p. 87. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1042.

Eldred, Frank R., reports that ten lots of betanaphthol had melting points from 121° to 122°.—*Ibid.* p. 891.

BISMUTHI CITRAS.

Seidell, Atherton, reports experimental determination of the solubility of bismuth citrate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 0.011 gm., and 100 gm. of U. S. P. alcohol will dissolve 0.07 gm. of bismuth citrate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 37–38, 91.

Osborne, Oliver T., thinks there is no need in the Pharmacopœia for bismuth citrate.—J. Am. M. Ass., 1910, v. 54, p. 133.

BISMUTHI ET AMMONII CITRAS.

Seidell, Atherton, reports experimental determinations of the solubility of bismuth and ammonium citrate in aqueous alcohol. He finds that at 25°, 100 gm. of water will dissolve 22.25 gm., and 100 gm. of U. S. P. alcohol will dissolve 0.0 gm. of bismuth and ammonium citrate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 38–39, 91.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 15) report that 3 samples of bismuth ammonium citrate contained from 48 to 54.6 per cent Bi_2O_3.

Osborne, Oliver T., thinks there is no need in the Pharmacopœia for bismuth and ammonium citrate.—J. Am. M. Ass., 1910, v. 54, p. 133.

BISMUTHI OXIDUM HYDRATUM N. F.

Vanino and Zumbusch discuss the chemistry of hydrated oxide of bismuth and review some of the literature relating to this preparation. For producing a nitrate free preparation they should recommend the use of mannite in the original bismuth nitrate solution.—Arch. d. Pharm., 1910, v. 248, pp. 665–669.

BISMUTHI SUBCARBONAS.

Gane and Webster point out that, owing to the enormous doses frequently given of some bismuth salts, it is necessary to be sure that these products are of the highest purity obtainable. Especially is it necessary to secure freedom from excessive traces of arsenic, and a definite limit should be placed upon the amount permissible, say not to exceed 5 parts per million. Comparatively few samples of bismuth salts comply absolutely with the present U. S. P. requirements.—Drug Topics, 1910, v. 25, p. 5.

Eldred, Frank R., reports that 16 lots of bismuth subcarbonate yielded on ignition from 91 per cent to 91.5 per cent of bismuth oxide.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 891.

The Committee of Reference in Pharmacy thinks that bismuth carbonate should be required to contain not more nitrate than would correspond to 2 per cent of bismuth subnitrate, calculated as $BiONO_3H_2O$. (Compare also report, 1908, p. 14.)—Brit. & Col. Drug., Lond., 1910, v. 58, p. 29.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 15) report that in only 7 samples, out of 23, were faint traces of nitric acid present. The Bi_2O_3 content ranged from 90 to 91 per cent.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 28) report that they have met with a sample of bismuth carbonate containing quite an appreciable quantity of magnesium.

BISMUTHI SUBGALLAS.

Dohme and Engelhardt state that the Ph. Hung. III directs that bismuth subgallate should give on incineration 50 to 56 per cent of bismuth oxide. The test for arsenic is made with Bettendorf's reagent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1173.

Eldred, Frank R., reports that twenty-four lots of bismuth subgallate yielded on ignition from 51.8 per cent to 53.6 per cent of bismuth oxide; one lot yielded 55.7 per cent, and one only 51 per cent.—*Ibid.* p. 891.

BISMUTHI SUBNITRAS.

Dohme and Engelhardt state that the Ph. Hung. III directs that bismuth subnitrate should leave on incineration 76 to 82 per cent of bismuth oxide.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1173.

Eldred, Frank R., reports that 36 lots of bismuth subnitrate yielded amounts of bismuth oxide varying from 79.7 per cent to 80.6 per cent. One lot yielded 86 per cent of bismuth oxide, and one only 77 per cent.—*Ibid.* p. 891.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 16) report that a French sample of bismuth subnitrate examined contained the equivalent of 16.4 per cent N_2O_5 by Upsher Smith's process.

Harrison, J. B. P., discusses the determination of the acid radical and its relation to the constitution of commercial bismuth subnitrate.—Analyst. London, 1910, v. 35, pp. 118–124. See also Pharm. J. 1910, v. 30, p. 481.

Osborne, Oliver T., thinks there is but little difference between the subnitrate of bismuth and the subcarbonate of bismuth, the subnitrate being perhaps the better preparation; he makes some suggestions as to the proper method and time of administration.—J. Am. M. Ass., 1910, v. 54, p. 132.

Brady, William, says that giving a dose of a grain or two of bismuth in tablet form is equivalent to pasting a bismuth label on the patient's epigastrium. If the bismuth is intended to act on the gastric mucosa, one large daily dose of from four to ten grammes, suspended in water and mucilage, given early in the morning on an empty stomach serves every purpose. If directed toward intestinal disease, the doses should follow the meals by some two hour intervals.—N. York M. J., 1910, v. 91, p. 209.

Hulse, Judson A., thinks bismuth subnitrate superior to bismuth milks.—J. Am. M. Ass., 1910, v. 55, p. 236.

Marre and Tailander's observations show that, so far from helping the formation of nitrites, the X-rays exert a restraining influence on the decomposition of bismuth subnitrate.—Chem. & Drug., 1910, v. 76, p. 726. See also Compt. rend. Soc. Biol. 1910, v. 68, p. 256.

Hays, Harold, contributes a note on bismuth subnitrate gauze for use in the nose.—J. Am. M. Ass., 1910, v. 54, p. 282.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 123–126) states that the comprehensive reports of Beck and Beck prove that bismuth subnitrate is not only a useful diagnostic for the X-ray investigation of fistulous passages, but also a useful therapeutic remedy in fistulæ and chronic suppuration.

Additional references on the chemistry and uses of bismuth subnitrate, and other salts of bismuth will be found in Chemical Abstracts, J. Am. M. Ass., and Index Medicus.

BISMUTHI SUBSALICYLAS.

Seidell, Atherton, reports experimental determinations of the solubility of bismuth subsalicylate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 0.01 gm., and 100 gm. of U. S. P. alcohol will dissolve 0.105 gm. of bismuth salicylate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 64–65, 91.

Eldred, Frank R., reports that in the five lots of bismuth subsalicylate examined, the yield of bismuth oxide varied from 62.6 per cent to 66.5 per cent.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 891.

Beilstein, Christian, reports that a sample of bismuth subsalicylate was found which contained an excessive amount of free salicylic acid.—Proc. N. W. D. A., 1910, p. 100.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 16) report that 8 samples of bismuth salicylate contained from 63.4 to 64.5 per cent Bi_2O_3. The composition of this salt is, however, variable, and some more exact method of assay is desirable. In no sample did they discover more than traces of free salicylic acid.

BROMOFORMUM.

Riedel's Berichte (1910, p. xxvii) suggests that the silver test with bromoform should be restricted to the production of an opalescence, not a distinct precipitate.

Mittelbach, William, declares that bromoformum is very rarely mentioned in our literature and he believes it is used still less.—Proc. Missouri Pharm. Ass., 1910, p. 98.

Gane and Webster assert that bromoform was never very popular and is falling into disuse. It is probably no more efficient than chloroform for all purposes and it is certainly far more dangerous. It should not have been included in the U. S. P. VIII.—Drug Topics, 1910, v. 25, p. 5.

Manseau, A., contributes a note on syrup of bromoform.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, p. 160.

Several references on poisoning by bromoform will be found in the Index Medicus.

BROMUM.

Gane and Webster point out that bromine has no medicinal use and should not appear in the body of the U. S. P.—Drug Topics, 1910, v. 25, p. 5.

Bray, W. C., reports observations on the hydrolysis of iodine and of bromine.—J. Am. Chem. Soc., 1910, v. 32, pp. 932–936.

Sudborough and Thomas discuss the addition of bromine to unsaturated compounds.—J. Chem. Soc., Lond., 1910, v. 97, pp. 715–720.

Dibdin, W. J., discusses the colorimetric estimation of small quantities of bromine in the presence of large quantities of chlorine and small quantities of iodine. The method depends on the interaction of free chlorine with a bromide and iodide by which free bromine and iodine are liberated.—Analyst, London, 1910, v. 35, pp. 159–161.

Bilinkis, Lea (Therap. Monatsh., 24, 75–82) reports observations on the excretion of organic and inorganic bromine preparations. See also Bermann, Eva (*Ibid.*, 183–90).—Chem. Abstr., 1910, v. 4, p. 1762.

Wood, H. C., Jr., commenting on the substitutes for bromides, asserts that the irritation of the stomach by inorganic bromides is generally due to faulty administration and it is a matter of much doubt whether there is a necessity for any of the organic combinations in which bromine is the active ingredient.—J. Am. M. Ass., 1910, v. 55, p. 30.

Osborne, Oliver T., thinks that potassium and sodium bromides are the only bromide salts needed. Ammonium bromide is disagreeable, lithium bromide is irritant, and strontium bromide and calcium bromide have no special advantages.—J. Am. M. Ass., 1910, v. 54, p. 468.

For additional references on the chemistry, pharmacology and uses of bromine and the bromides, see under the several pharmacopœial headings.

BUCHU.

The Cape Correspondent (Chem. & Drug. 1910, v. 76, p. 356) contributes a brief note on growth and collection of buchu leaves in Cape Colony. The buchu market in London mainly depends on the American demand.

An editorial (*Ibid.*, p. 703) discusses the stringency in the buchu market and gives statistics of production for several years past.

An editorial (Drug Topics, 1910, v. 25, p. 306) points out that there is an apparent shortage in the supply of buchu.

An editorial (Chem. & Drug. 1910, v. 77, p. 622) discusses the high price of buchu leaves, and the investigations of the Cape Agricultural Department as to the intrinsic value of the leaves of several Rutaceous plants.

Rusby, H. H., states that he has met with buchu containing 23 per cent of inert stems.—Practical Druggist, 1910, v. 27, p. 424. See also Drug. Circ., 1910, v. 54, p. 617.

Reum, Arthur W., reports that in commercial buchu (short) one may expect to find approximately 86.2 per cent of leaves, 6.4 per cent of stems and 7.4 per cent of fruit, etc.—Pacific Pharmacist, 1909–10, v. 4, p. 456.

Kebler, L. F., asserts that it is a well-known fact that the buchu of commerce always contains greater or smaller quantities of foreign material, such as stems, twigs, old worthless leaves, etc., derived from the plant from which the leaves are gathered. These substances are incidentally introduced at the time of collection.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 592.

Pearson, W. A., reports on a sample of Karoo buchu. This variety is from South America and is derived from *Diosma succulenta.* It is said to be used extensively in Porto Rico.—Proc. Pennsylvania Pharm. Ass., 1910, p. 136.

Holmes, E. M., contributes a note on the new adulterant of buchu which corresponds well with the leaflets of *Psoralea obliqua* E. Mey, which was collected in the neighborhood where *Barosma betulina* grows.—Pharm. J. 1910, v. 31 (85), p. 69. See also p. 464.

An editorial (Chem. & Drug. 1910, v. 77, p. 17) describes and illustrates a buchu substitute.

Froembling, W., submits a specimen of *Psoralea bracteata* L., which nearly tallies with the above description.—*Ibid.*, p. 293. See also editorial, p. 515.

LaWall and Bradshaw report finding from 4.2 to 5.5 per cent ash in short buchu leaves.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 751.

Beringer, G. M., thinks the menstruum in fluid extract of buchu should be alcohol.—*Ibid.*, p. 781.

Sayre, L. E., reports on 1 sample of fluid extract of buchu: illegal.—*Ibid.*, p. 1095.

Osborne, Oliver T., thinks the fluid extract of buchu will probably act as well as a fresh infusion.—J. Am. M. Ass., 1910, v. 54, p. 377.

BUCHU (LONG).

Rusby, H. H., points out that long buchu and spurious buchu may be stopped under the name of buchu, but if offered under their real names must be accepted for entrance.—Drug. Circ., 1910, v. 54, p. 6.

Reum, Arthur W., reports that commercial buchu (long) was found to vary from 89.2 to 95.7 per cent of leaves, and from 4.3 to 10.8 per cent of stems.—Pacific Pharmacist, 1909–10, v. 4, p. 456.

LaWall and Bradshaw report finding 5.55 per cent ash in long buchu leaves.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 751.

CAFFEINA.

Goris and Fluteaux review the actual state of our knowledge as to the plants which contain caffeine.—Bull. sc. pharmacol. 1910, v. 17, pp. 599–615. Also Comp. rend. Congr. Internat. Pharm., 1910, (Brussels, 1911), pp. 141–157; and Pharm. Post, 1910, v. 43, p. 723.

Gane and Webster report that the U. S. P. melting point 236.8° for caffeine is rather high, commercial samples having usually a melting point of from 230° to 234°. Much depends, however, on how the melting point is taken.—Drug Topics, 1910, v. 25, p. 5.

The Committee of Reference in Pharmacy suggests adding to the tests, the dried alkaloid melts at 234°–235°. (Compare Report, 1908, p. 14).—Brit. & Col. Drug., Lond., 1910, v. 58, p. 29.

Burmann, James, discusses methods for the estimation of caffeine in tea and in green and roasted coffee.—Ann. de chim. analyt. Par., 1910, v. 15, pp. 378–383. Also Rep. pharm. 1910, v. 22, pp. 481–485.

Rosenthaler and Görner in discussing the use of aromatic nitro-derivatives as precipitants for alkaloids report negative results with caffeine.—Ztschr. anal. Chem., 1910, v. 49, p. 347.

Ultée, A. J., discusses the chemical combinations of caffeine with phenols.—Chem. Weekblad, 1910, v. 7, pp. 32–34.

Armani and Barboni (Rend. Soc. chim. Ital. 1910, p. 48) discuss the color reactions of caffeine.—Ann. chim. analyt. 1910, v. 15, p. 286.

Fuller, H. C., discusses the determination of caffeine in medicated soft drinks.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 191. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Puckner and Warren report on the estimation of caffeine in the presence of sodium bicarbonate and acetanilide.—Rep. Chem. Lab. Am. M. Ass., 1910, v. 3, p. 50.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 17) report that, of 4 samples of caffeine tested, the alkaloidal strength was from 97 to 99 per cent. Ash was invariably quite absent.

A review of the Ph. Germ. V points out that the difference in the chemical nature of theobromine-sodium salicylate and caffeine sodium salicylate is indicated by the official Ph. Germ. titles theobromine-natrium salicylic, and coffeinum-natrium salicylic; the former indicating that it is a chemical combination, while the latter is a simple mixture.—Pharm. Ztg. 1910, v. 55, p. 1003.

Salant and Rieger discuss the elimination of creatin and creatinin, after the administration of caffeine.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, p. 400.

Salant and Phelps discuss the influence of caffeine on proteine metabolism in dogs, with some remarks on demethylation in the body.—*Ibid.*, p. 401.

An editorial (Drug Topics, 1910, v. 25, pp. 17–18), commenting on "coffee drunkenness," states that the idea that caffeine causes Bright's disease is new to medical science, and if we are to have much more of this form of "science," from subordinate government officials, science should be delivered from its friends.

Osborne, Oliver T., thinks it probable that the repeated administration of strong, fresh decoctions of coffee, taken a cupful at a time, is as valuable a diuretic as is the drug caffeine, the extra amount of water thus taken being probably an advantage.—J. Am. M. Ass., 1910, v. 54, p. 376.

Fleisher and Loeb report a study on the influence of caffeine on absorption from the peritoneal cavity and the influence of diuresis on œdema.—J. Exper. M., N. Y., 1910, v. 12, pp. 510–532.

An editorial (Nat. Druggist, 1910, v. 40, p. 100) calls attention to some misleading statements that have been made regarding the harmfulness of caffeine.

Fisher, C. E., states that the fright which so often increases the actual physical shock of injury or surgery responds more readily to coffee than to whiskey and strychnia.—J. Am. Inst. Homœop. 1910, v. 2, p. 18.

Pachon and Perrot compare the cardiovascular action of green coffee with that of corresponding doses of caffeine.—Compt. rend. Acad. sc. 1910, v. 150, pp. 1703–1705.

CAFFEINA CITRATA.

Schelenz, Hermann, reviews the history of caffeine.—Pharm. Ztg. 1910, v. 55, pp. 86–87.

Scheffler, H. L., calls attention to the variation in the requirements made by the different pharmacopœias for making combinations of caffeine and citric acid.—*Ibid.* p. 17.

Berger reviews a recent paper on citrated caffeine and calls attention to the history and variability of this product.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 317–318.

Gane and Webster report that the percentage of caffeine in citrated caffeine is liable to vary, owing to excess of water in the caffeine and excess of moisture in the citric acid. The caffeine may, however, readily be estimated in the compound and the citric acid titrated with standard alkali or the caffeine can be determined by difference. The presence of caffeine does not interfere with the end reaction. A limit of moisture might be given.—Drug Topics, 1910, v. 25, p. 5.

CAFFEINÆ SODIO-BENZOAS N. F.

Hunt, Reid, reports that caffeinæ sodio-benzoas is included in the Ph. Austr., Ph. Dan., Ph. Ndl., Ph. Hung., Ph. Ital., Ph. Japon and Ph. Helv.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 772.

CAFFEINÆ SODIO-SALICYLAS N. F.

Hunt, Reid, reports that caffeinæ sodio-salicylas is included in the Ph. Belg., Ph. Dan., Ph. Ndl. Ph. Germ., Ph. Hung., Ph. Japon, Ph. Norv., Ph. Russ. and Ph. Helv.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 772.

Mossler, Gustav, outlines the method for making caffeine sodium salicylate, discusses its physical and chemical characteristics and enumerates a number of tests for identity and purity.—Ztschr. allg. österr. Apoth.-Ver., 1910, v. 48, p. 142.

CALAMUS.

Gane and Webster report that calamus is a candidate for retirement. It has no medicinal virtues that cannot equally well be obtained from half a dozen other carminatives. It is not as popular a domestic remedy as it once was.—Drug Topics, 1910, v. 25, p. 5.

LaWall and Bradshaw report finding from 2.4 to 4.2 per cent ash in calamus.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 751.

CALCII BROMIDUM.

Rosengarten, George D., states that if a quantity of this salt is used in testing for bromates, and only a drop of diluted sulphuric acid, a yellowish color may be developed, but in such instances bromates could not be detected by any further tests. However, if the salt is covered with diluted sulphuric acid no color results.—Am. J. Pharm. 1910, v. 82, p. 30.

Brown, Linwood A., points out that the great difficulty in keeping calcium bromide is on account of its extreme deliquescence. The bottle should be stoppered with a good sound cork and coated with a layer of paraffin which should be sealed with a hot spatula each time a bottle is opened.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, pp. 136–137.

Richards and Hönigschmid, in a contribution on the revision of the atomic weight of calcium, report on the analysis of calcium bromide. In their summary they point out that calcium bromide proved to be less stable on melting than the corresponding barium and strontium salts.—J. Am. Chem. Soc., 1910, v. 32, pp. 1577–1590.

Gane and Webster report that calcium bromide is very little used and probably of no greater value than potassium bromide. It only serves to increase the bulk of the Pharmacopœia.—Drug Topics, 1910, v. 25, p. 36.

CALCII CARBONAS PRÆCIPITATUS.

Kleinstück, M., discusses the making of precipitated calcium carbonate and outlines a method for making this product by precipitating an aqueous solution of calcium chloride with a mixture of ammonium carbonate and ammonia.—Pharm. Zentralh. 1910, v. 51, pp. 63–64.

Skinner, Robert P., reports on the manufacture of precipitated calcium carbonate, its present cost and pharmaceutical uses. He states that of late it has been used with much success in combination with calcium phosphate in the treatment of diabetes.—Cons. & Tr. Rep. July 20, 1910, p. 180.

Dohme and Engelhardt state that in the Ph. Hung. III a test for nitrates with ferrous sulphate is given.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1173.

Beilstein, Christian, reports that samples of precipitated calcium carbonate examined during the last year have all contained an excess of iron and aluminum phosphates, gave unsatisfactory results with the heavy metal tests, and failed completely to dissolve in hydrochloric acid. One sample contained an eighth of one per cent of iron.—Proc. N. W. D. A. 1910, p. 100.

Johnston, John, reports observations on the thermal dissociation of calcium carbonate.—J. Am. Chem. Soc., 1910, v. 32, pp. 938–946.

Yeager, Wm. H., thinks that calcaria carbonica is the remedy indicated in the chronic, torpid troubles, when we feel that the child should get well but does not do so on account of the existing dyscrasia.—Hahnemann. Month., 1910, v. 45, p. 375.

Fornias, E., quotes Wassily who points out that calcaria carb. is the remedy for rachitic and leucophlegmatic patients with light hair.—*Ibid.* p. 552.

An unsigned abstract (Envoy) states that many experienced physicians, among them the late Richard Hughes, say that calcarea carb. 30 will surely relieve very many cases of excruciating pain from the passing of gall stones. Those subject to this ill ought to keep a vial on hand. All who have had experience say that the 30th potency should be used.—J. Am. Inst. Homœop. 1910, v. 2, p. 251.

CALCII CHLORIDUM.

The Committee of Reference in Pharmacy suggests that the moisture present should not exceed 5 per cent. (Compare Report, 1908, p. 15.)—Brit. & Col. Drug., Lond., 1910, v. 58, p. 29.

Gane and Webster think that there should be some indication given to the physician how calcium chloride should be dispensed. The statement "very deliquescent" is not sufficient, but the caution should be added to dispense in solution, as it is too deliquescent for pills, capsules or cachets. Owing to the varied sources of supply this salt should be carefully examined for impurities. Much of what is offered commercially is unfit for medicinal uses.—Drug Topics, 1910, v. 25, p. 36.

An editorial (Drug Topics, 1910, v. 25, p. 194) discusses the administration of calcium chloride, and points out that perhaps the best flavoring agents for masking the bitter saline taste of this substance are cinnamon and peppermint.

An editorial (Brit. M. J., 1910, v. 1, p. 1191) calls attention to the recent work of Ciuffini (Policlinico, 1909, vol. xvi, p. 12) who confirms Collingwood's conclusions as to the inability of calcium chloride to influence the coagulability of the blood. See also *Ibid.* p. 1268.

An editorial note (Lancet 1910, v. 178, p. 1368) discusses the therapeutic applications of calcium chloride with special reference to the recent contribution of Moncany (La Clinique). See also *Ibid.* p. 1441.

Barr, James, publishes an address on the use and abuse of the lime salts in health and disease.—Brit. M. J., 1910, v. 2, pp. 829–835.

Lake, Richard, reports successful results from the use of calcium chloride, 30 to 45 grains a day for two weeks, in rhinorrhœa. *Ibid.* p. 79.

An editorial (Lancet 1910, v. 178, p. 118) discusses the treatment of epilepsy with calcium salts, with reference to recent reports.

An editorial (Brit. M. J., 1910, v. 1, p. 280) calls attention to a recent contribution by Julius Donath on the use of calcium in the treatment of epilepsy. See also *Ibid.* p. 351.

Imbert and Bonnamour discuss the action of calcium chloride and of diverse chlorides on urinary elimination.—J. physiol. et. path. gén. 1910, v. 12, pp. 86–89.

An editorial (Brit. M. J., 1910, v. 1, p. 772) discusses the use of calcium chloride in the treatment of albuminuria, with special reference to the recent observations by Imbert and Bonnamour.

An editorial (Hahnemann. Month., 1910, v. 45, p. 54) points out that calcium salts are attracting the attention of physicians during the past few years on account of the important part which they play in the blood, and expresses the belief that the calcareas so long and successfully employed by homœopathic practitioners are at last beginning to be accorded the recognition their value merits by the dominant school of medicine.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, p. 133) states that Wright's original investigations on the action of calcium chloride on the clotting of blood lead to the discovery of valuable new methods of applying calcium salts in therapeutics. See also J. Am. M. Ass. and Index Medicus.

CALCIUM GLYCEROPHOSPHATE.

An unsigned article (Am. Druggist, 1910, v. 57, p. 74) states that the calcium glycerophosphate met with commercially in France at present is not the official mono-glycerophosphate. For the most part it is a mixture of mono- and di-glycerophosphates. The presence in these glycerophosphates of phosphorus compounds other than the official salt is shown by the divergent amounts of lime and of phosphoric acid they contain.

Astruc, A., presents an extended study of calcium glycerophosphate.—J. pharm. et chim. 1910, v. 1, pp. 490–497, 539–543, 577–582; v. 2, pp. 11–20.

CALCII HYPOPHOSPHIS.

Dohme and Engelhardt state that the Ph. Hung. III directs that calcium hypophosphite should contain 90 per cent of absolute calcium hyphophosphite.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1173–74.

Dunning, H. A. B., thinks that the U. S. P. in connection with the copper sulphate test under calcium hypophosphites, should direct that the solution be acidified.—*Ibid.* p. 970.

Sayre, L. E., reports on 9 samples of calcium hyphophosphite: 3 passed; 6 illegal.—*Ibid.* p. 1096.

Gane and Webster note that it is gradually being recognized that the hyphophosphites are a delusion and a snare as regards their supposed powers as carriers of phosphorus in an assimilable form, but it is probably too early to hope for their elimination from the Pharmacopœia. The only benefit from calcium hypophosphite is due to its calcium content and not to the acid radicle. The commercial drug often contains phosphite as an impurity. There hardly seems to be any necessity for nine official salts of calcium. The number could be cut down without injury to the cause of medicine.—Drug Topics, 1910, v. 25, p. 36.

CALCIUM LACTATE.

Hunt, Reid, reports that calcium lactate is included in the Ph. Belg., Ph. Ital. and Ph. Hisp.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 772.

Towles, Caroline, concludes a study of calcium metabolism, with special reference to exophthalmic goitre, with the statement that calcium, given in the form of lactate, enters into the general metabolism or allows the calcium already present in the body to be utilized without loss. Given by the mouth there is no toxic effect from the administration of 20 grains of calcium lactate over a period of fifteen days.—Am. J. M. Sc. 1910, v. 140, pp. 100–113.

Rudolf, Robert Dawson, states that calcium lactate does not appear to have any marked influence upon the coagulation time of the blood of normal individuals.—*Ibid.* p. 815.

An editorial (Med. Rec., N. Y., 1910, v. 77, p. 196) quotes recommendations by A. C. F. Halford (Austral. M. Gaz. Nov. 20, 1909) of large doses of calcium lactate in eclampsia and in the albuminuria of pregnancy.

An editorial (*Ibid.* v. 78, p. 1099) urges a thorough trial of calcium lactate, as recommended by Mitchell, in the toxæmia of pregnancy. See also *Ibid.* p. 906.

Goodall, Harry W., presents a note on paroxysmal hæmoglobinuria, with the report of a case presenting certain interesting clinical features, with apparent cure by the administration of calcium lactate.—J. Am. M. Ass., 1910, v. 54, p. 1372.

Levison, Louis A., discusses calcium in tuberculosis, a note on its effect on the temperature curve.—*Ibid.* p. 613.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 133–134) calls attention to a communication by Simpson on the value of calcium lactate in hæmorrhages from the upper respiratory passages.

See also J. Am. M. Ass. and Index Medicus.

CALCII PHOSPHAS PRÆCIPITATUS.

Rosengarten, George D., thinks that the limit for chlorides in calcium phosphate is exceedingly difficult to attain.—Am. J. Pharm. 1910, v. 82, p. 30.

Riedel's Berichte (1910, p. xxvii) points out that calcium phosphate is not soluble in acetic acid.

Patch, E. L., asserts that no precipitated calcium phosphate can be had strictly pharmacopœial. The majority of houses state that thay can supply technical only. The assay of this product is from 1.1 per cent to 4 per cent chloride. A lot labeled 2 per cent chloride assayed 3.9 per cent. The best lot obtainable, guaranteed to be U. S. P., had 0.5 per cent chloride.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 742.

Gane and Webster assert that calcium phosphate is not needed, as it has no medicinal uses of importance.—Drug Topics, 1910, v. 25, p. 36.

Adams, F. X., asserts that calc. phos. is indicated by a feeling as if ants were creeping on the skin. By the tongue, a clean tongue moderately, and if coated, not a dirty or bilious coating, rather a clear transparent or albuminous coating.—Eclectic M. J., 1910, v. 70, pp. 75–76.

Yeager, Wm. H., thinks that calcarea phosphorica has great curative powers in cases of diarrhœa in children and any measure within the grasp of a physician that can reach down and snatch a baby from the very clutches of death is worthy of his utmost consideration.—Hahnemann. Month., 1910, v. 45, p. 376.

CALCII SULPHAS EXSICCATUS.

Riedel's Berichte (1910, p. xxvii) points out that the time limit test of the Ph. Germ. IV, 5 minutes, is too short for complete hardening of the mixture of this substance with water.

Gane and Webster assert that exsiccated calcium sulphate was introduced only for the preparation of the sulphide, and consequently unnecessary, as processes of manufacture are being eliminated. It has no medicinal uses whatever. The "exsiccatus" in the title should be "exsiccata."—Drug Topics, 1910, v. 25, p. 36.

Moorhead, S. W., discusses the use of plaster of paris dressings for fractures of the shaft of the humerus.—Therap. Gaz., 1910, v. 34, pp. 460–463.

Brown, Linwood A., points out that plaster of paris is used almost entirely in medicine as a dressing or plaster cast, and unless well protected from moisture, will not "set." The common practice of keeping it in boxes or drawers, is gross carelessness.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 137.

CALENDULA.

LaWall and Bradshaw report finding from 7.2 to 8.5 per cent ash in calendula.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 751.

Havenhill, L. D., outlines a modified formula for the tincture of calendula.—*Ibid.* p. 786.

Gane and Webster assert that calendula is a survival of the times when "Yarbs" were considered the *sine qua non* of medical treatment. It has no medicinal virtues and should long since have been discarded. The reputed value of the tincture as an application to sprains, etc., lies in the menstrum rather than the drug itself.—Drug Topics, 1910, v. 25, p. 36.

Fisher, C. E., quotes Thorer as preferring calendula to arnica as an external dressing for incised wounds.—J. Am. Inst. Homœop. 1910, v. 2, p. 16.

Dewey, W. A. (Med. Century), notes that, regardless of what else is done, succus calendula is the best external dressing for cancer, running sores, blood injuries, etc.—*Ibid.*, p. 420.

An unsigned abstract (Envoy) advises to anoint the raw chaps and cracks of the hands caused by cold weather with calendulated glycerine, and heal them.—J. Am. Inst. Homœop 1910, v. 2, p. 251.

CALUMBA.

Tunmann, O., in discussing the occurrence of calumba in the Hamburg drug market, asserts that the demand for this drug is extremely small, and imports are frequent and usually small. The drug comes by way of Zanzibar and is evidently produced in South Africa.—Apoth. Ztg., 1910, v. 25, p. 453.

Brown, Linwood A., points out that calumba should be thoroughly dried and kept in a dry place. Should be closely watched for insects, as it is liable to be attacked, if kept for any length of time. Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 131.

La Wall and Bradshaw report finding 6.95 and 10.4 per cent ash in calumba.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 751.

Sayre, L. E., reports on 25 samples of tincture of calumba: 7 passed; 18 illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1095. See also Bull. Kansas Bd. Health, 1910, v. 6, p. 41, and Proc. Kansas Pharm. Ass., 1910, p. 57.

Gane and Webster state that calumba is a simple bitter which has no advantage over a dozen others. It should be dropped from the Pharmacopœia, as it is seldom used nowadays, and can with advantage be replaced with gentian, which is easier to obtain and less subject to sophistication.—Drug Topics, 1910, v. 25, p. 36.

Osborne, Oliver T., thinks that calumba as well as its fluid extract and tincture should be deleted from the Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 209.

CALX.

Gane and Webster point out that in view of the alarm with which some physicians and chemists look upon traces of impurities in other chemicals, it would seem advisable to provide for a lesser amount than 10 per cent of allowable impurities in calcium oxide. Moreover, it is possible, in New York at least, to obtain a "building lime" that runs uniformly over 95 per cent of calcium oxide.—Drug Topics, 1910, v. 25, p. 36.

Brown, Linwood A., states that lime is readily converted into "slaked lime" on exposure to air, forming a mixture of hydrate and carbonate of lime. Only unslaked lime should be used in preparing liquor calcis.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 137.

Meade, Richard K., discusses the manufacture and properties of hydrated lime.—Tr. Am. Inst. Chem. Eng., 1910, v. 3, pp. 312-326.

McClintic, Thomas B., outlines methods for using lime as a disinfectant.—Public Health Bulletin No. 42, 1910, Washington, 1911, pp. 21-22.

Meyer, Hans, discusses briefly the action of lime salts.—Brit. M. J., 1910, v. 2, p. 1594.

Harbert, J. P., asserts that the use of lime in some form is essential to success in the treatment of certain eye diseases.—Eclectic M. J., 1910, v. LXX, pp. 69-70.

CALX CHLORINATA.

Reusch, K., reviews the progress made in the production of chlorinated lime during 1909.—Chem. Ztg., 1910, v. 34, p. 264.

Dohme and Engelhardt state that the Ph. Hung. III directs that chlorinated lime should contain 25 per cent of available chlorine gas.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1173.

Gane and Webster assert that the reduction in strength to 30 per cent has not improved the commercial chlorinated lime, but has been of benefit to manufacturers only. The article is prone to lose strength on keeping, and it is not sent out from the factory above standard strength. However, the Pharmacopœia is a standard for medicinal products only and should not include preparations of this type.—Drug Topics, 1910, v. 25, p. 36.

Taylor, Robert Llewellyn, reports the results of researches on bleaching powder, and discusses the action of carbon dioxide and the action of air on bleaching powder.—J. Chem. Soc. Lond., 1910, v. 97. pp. 2541-2556.

Jacobsen, C., discusses commercial chlorinated lime and the method of determining its chlorine content.—Apoth. Ztg., 1910, v. 25, pp. 21-22.

Leubner, Bernard O., discusses the requirements for chlorinated lime, and expresses the belief that a chlorinated lime sold in bulk is usually found to contain a larger percentage of available chlorine than that sold in packages.—Merck's Rep., 1910, v. 19, p. 164.

Nester, Herman A., reports the examination of a sample of chlorinated lime which yielded only 18 per cent of available chlorine and after standing two months was practically useless.—Proc. Texas Pharm. Ass., 1910, pp. 72-73.

Arny, H. V., reports on 11 samples submitted: 4 U. S. P., the rest varying from 0.2 per cent to 27.1 per cent.—Proc. Ohio Pharm. Ass., 1910, p. 69.

Sayre, L. E., reports on 9 samples of chlorinated lime: 4 passed; 5 illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1097.

Lythgoe, Hermann C., reports finding one adulterated sample of chlorinated lime. This was branded chloride of lime, and contained but 26 per cent of available chlorine.—Rep. Massachusetts Bd. Health, 1910, p. 362.

McClintic, Thomas B., outlines methods for using chlorinated lime as a disinfectant.—Public Health Bulletin No. 42, 1910, Washington, 1911, pp. 22-23.

CALX SULPHURATA.

Rosengarten, George D., states that the test for the percentage of pure calcium sulphide is somewhat misleading, as there is always iron present, which will, on the addition of ammonia, impart a brownish color to the filtrate.—Am. J. Pharm., 1910, v. 82, p. 31.

Davis, P. M., reports that of 5 samples of sulphurated lime assayed only one contained as much as 55 per cent calcium sulphide. He experienced great difficulty in preparing a satisfactory sample from commercial calcium sulphate, but had no difficulty when a chemically pure sulphate was used.—*Ibid.*, p. 242.

Gane and Webster assert that the process of manufacture of sulphurated lime should be omitted and provision made for a product of higher standard. "A mixture containing at least 60 per cent of calcium sulphide, together with unchanged calcium sulphate and carbon in varying proportions," is not exactly a good example of twentieth century chemical science.—Drug Topics, 1910, v. 25, p. 36.

Leubner, Bernard O., discusses the valuation of calx sulphurata and reports a number of results obtained by titration, the U. S. P. 1890 method and the U. S. P. modified method.—Merck's Rep., 1910, v. 19, p. 125.

Schmidt and Engelhardt report observations on the stability of calcium sulphide pills and tablets.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1005–1006.

Abogado, E. L., discusses the place of calcium sulphide in modern therapeutics.—Cron. med. mex. 1910, v. 13, pp. 227–230, 246–249.

Harbert, J. P., states that calcium sulphur is indicated in various eye lesions by reason of suppuration. It is one of our best agents to prevent the recurrence of styes. It is also indicated in tarsal tumors.—Eclectic M. J., 1910, v. 70, p. 69.

Fornias, E., quotes Wassily who points out that hepar sulph calc acts on scrofulous, lymphatic subjects, predisposed to moist eruptions.—Hahnemann, Month. 1910, v. 45, p. 553.

E. Merck's Annual Report (1910, Darmstadt. 1911, v. 24, p. 135) calls attention to the use of calcium sulphide in various infective diseases such as scarlet fever, typhoid fever and measles.

CAMBOGIA.

Beilstein, Christian, reports that one lot of pipe gamboge yielded 18 per cent of ash, consisting almost entirely of fine white sand. Four lots of powdered gamboge were found to contain more than 25 per cent of material insoluble in alcohol, which is the amount allowed by the Pharmacopœia.—Proc. N. W. D. A. 1910, p. 106.

Bernegau, L. H., says that of five samples of gamboge examined, two exceeded the U. S. P. allowance of 25 per cent alcohol insoluble matter, one testing 29.16 and the other 39.93 per cent. In no case did the ash exceed the U. S. P. allowance of 3 per cent.—Proc. Pennsylvania Pharm. Ass., 1910, p. 136.

Taylor, F. O., reports a study of 15 samples of gamboge, only 6 of which were unquestionable. Six out of 8 powdered samples, and 2 out of 7 samples of pipe or broken gamboge, were so heavily adulterated that there would be no question about their rejection for pharmaceutical use.—J. Ind. & Eng. Chem., 1910, v. 2, pp. 208–210.

Gane and Webster note that cambogia, owing to its powerful irritating properties, is never prescribed alone and could well be dispensed with. Its place in the compound cathartic pill could be vacated without loss of efficiency.—Drug Topics, 1910, v. 25, p. 36.

Osborne, Oliver T., thinks it probable that gamboge could be dropped without any serious loss of cathartic efficiency.—J. Am. M. Ass., 1910, v. 54, p. 291.

CAMPHORA.

Reat, S. C., reports that the total output of the Camphor Monopoly of the Government of Formosa for the fiscal year ended March 31, 1910, is estimated at about 8,000,000 pounds of camphor and camphor oil.—Cons. & Tr. Rep., July 7, 1910, p. 42.

An unsigned note (Sc. Am. Suppl., 1910, v. 70, p. 271) presents some data relating to the Japanese camphor industry.

Schimmel & Co. (Semi-Annual Report, October, 1910, pp. 25–27). present a table showing the amount of crude camphor and the amount of refined camphor shipped from Japan and from Formosa in recent years, and point out that according to a Japanese estimate the world's requirements for the current year may result in a camphor shortage.

The Bureau of Manufactures has issued a monograph (pp. 15, with illustrations) on the camphor industry in foreign countries, containing reports from American consular officers in Japan, Formosa, Borneo, and Ceylon on the production of camphor from trees, and a report from Germany on its manufacture synthetically.—Cons. & Tr. Rep. Nov. 28, 1910, p. 765.

An unsigned article (Pharm. Era, N. Y., 1910, v. 43, pp. 1177–1178) discusses the world's camphor industry and the prospects of Formosan monopoly and presents several illustrations showing the collection of wood from camphor trees and the type of stove or still that is used.

Schimmel & Co., (Semi-Annual Report, April 1910, pp. 22–28) commenting on the production of camphor in Formosa and Japan, present an abstract from the Nachrichten für Handel und Industrie, published by the German Home Office, on the production of camphor in Japan.

Blanc, G., (Rev. Gén. Sc. Pur. et Appl.) concludes that, below a certain price, synthetic camphor cannot compete with natural camphor; and the purpose of the Japanese monopoly evidently is to maintain prices sufficiently low to compel German factories to suspend manufacture, and even to disappear, since it is impossible to tie up a costly plant indefinitely.—Chem. & Drug. 1910, v. 77, p. 910.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 78, September 5, pp. 7–8) reviews the American camphor trade and its control by the Japanese. See also Drug. Circ. 1910, v. 54, p. 552.

Geare, R. I., discusses the camphor industry and illustrates the distilling of camphor in Taito.—Nat. Druggist, 1910, v. 40, pp. 267–268.

Cayla, V., in a note on synthetic and natural camphor, discusses camphor culture in the federated Malay States.—J. Agric. trop. 1910, v. 10, pp. 8–11.

An editorial (Brit. & Col. Drug., Lond., 1910, v. 57, p. 186) calls attention to the experiments being made in the cultivation of camphor in the Malay States.

An unsigned note (Chem. & Drug. 1910, v. 77, p. 394) calls attention to the explanation of Janse (Teysmannia 1909, 37) of the erratic manner in which Borneo camphor occurs in the wood of the tree *Dryobalanops aromatica.*

Harris, Wm., in the "History of the Introduction of the Economic Plants of Jamaica," states that the camphor tree was brought to Jamaica by Thomas Clark in 1775.—Bull. Dept. Agric., Jamaïca, 1910, v. 1, No. 3, p. 183.

Gehe & Co., (Handels-Bericht 1910, p. 50) outline the method of making camphor in Japan, also present a table showing the value and amount of camphor exported to various countries of the world. They also discuss the composition of synthetic camphor and express the belief that this article is the equal of the natural camphor in all respects and should be recognized by the pharmacopœias.

Breves, Rudolph, thinks that as synthetic camphor is a commercial article now, it should be stated, if the pharmacist is allowed to substitute it for the genuine product, and if not tests to distinguish it should be given.—Practical Druggist, 1910, v. 28, p. 38.

Darmois, E., states that it is possible to prepare a highly active synthetic camphor under two forms: dextro lævorotatory. Each of these camphors is a mixture with a small quantity of its invert. It is possible by slight variation in the conditions of preparation, by operating for example at a very low temperature, to obtain a camphor identical with the natural product.—Compt. rend. Acad. sc. 1910, v. 150, pp. 925–927.

Xrayser II says that synthetic camphor is not yet added to the successful achievements of modern chemistry, as a companion to artificial dyes, synthetic perfumes, and a few other products which have made millions for discoverers and manufacturers. The Japanese Government has reduced the price of the natural camphor below that at which the synthetic can be produced. The latter product when used in wardrobes gives garments a musty odor, and this musty odor is as clear a distinction from the natural product as is the difference in their optical properties.—Chem. & Drug. 1910, v. 76, p. 393.

Dohme and Engelhardt state that in the Ph. Hung. III only the natural camphor is official.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1174.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 125) in reviewing the Ph. Hung. III requirements for camphor, point out that the Pharmacopœia requires that camphor have a specific gravity of 0.995 at 12°, but is silent as to the manner in which this difficult determination is to be carried out.

They also (*Ibid.* p. 129) review the Ph. Ital. III requirements for camphor.

Hartwich, C., points out that the Ph. Germ. V now permits of a melting point range for camphor of from 175° to 179°.—Apoth. Ztg. 1910, v. 25, p. 1036.

Gane and Webster note that the present U. S. P. restricts us to the use of the natural camphor, but so far no good reason has been presented why the artificial should not also be recognized. In all probability there will be a marked increase in the amount of synthetic camphor marketed during the next ten years, and in view of the control of the natural product by the Japanese Government it is not unlikely that higher prices will be asked for it as occasion arises. The synthetic article is identical in therapeutic properties with the natural, and for pharmaceutical purposes is of unexceptionable quality. The specific gravity of natural camphor is subject to slight variation, probably due to retention of more or less of the camphor oil. The official limit of 0.990 should be modified to 0.980 to 0.990 at 25°. Camphor which is very brittle has naturally more oil than should be present.—Drug Topics, 1910, v. 25, p. 36.

Menge, George A., examined 4 samples of camphor and points out that the resinous character of this substance was considered to exclude it from convenient investigation by a method involving the use of a closed capillary tube. It was further assumed that it could be conveniently investigated by a method which could be applied to fats and waxes, and it was therefore tentatively placed in that class of compounds.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, p. 88.

Wood and Scott report observations on the freezing point curve for mixtures of camphor and phenol.—J. Chem. Soc., Lond., 1910, v. 97, pp. 1573–1578.

Blanc, G., discusses the chemistry and composition of camphor and presents a brief résumé of the whole question.—Am. Chem. J., Balt., 1910, v. 43, pp. 255–278.

Lenz, W., reports on the chemical and physical characteristics of several samples of colonial camphor.—Arb. pharm. Inst. Univ. Berl. (1910), 1911, v. 8, pp. 227–236.

Noyes and Derick, in a contribution on molecular rearrangements in the camphor series, report observations on oxidation products of *l*- and *d*-laurolene. J. Am. Chem. Soc., 1910, v. 32, pp. 1061–1064.

Noyes and Kyriakides report observations on the synthesis of laurolene.—*Ibid.* pp. 1064–1068.

Noyes, William A., discusses the mechanism of the reactions by which laurolene is formed.—*Ibid.* pp. 1068–1070.

Noyes and Homberger, in a further contribution on molecular rearrangements in the camphor series, report observations on isocampholactone.—*Ibid.* pp. 1665–1669.

Noyes and Knight report observations on the derivatives of isocamphoric acid; *l*-dihydro-hydroxycampholytic acid.—*Ibid.* pp. 1669–1674.

Guerbet, Marcel, presents a note on certain condensation products of camphor, bornylene-camphor and bornylcamphor.—J. pharm. et chim. 1910, v. 1, pp. 510; also Bull. Soc. chim. France, 1910, v. 7, pp. 64–68.

Also on the transformation of camphor into campholic acid.—*Ibid.* v. 7, p. 68.

Aschan, Ossian, discusses the chemical constitution of camphene and points out its relation to camphor.—Ann. d. Chem., 1910, v. 374, pp. 336–378.

Komppa, Gust, discusses the chemistry and reports observations on the synthesis of camphor acids and of camphor.—*Ibid.* v. 370, pp. 209–233.

Vanstone, Ernest, discusses the vapor pressure of camphor and reports determinations at temperatures from 78° to 158°.—J. Chem. Soc., Lond., 1910, v. 97, pp. 429–443.

Mains, S. L., reports on 14 samples of camphor examined: 6, or 43 per cent, were below standard.—Proc. Nebraska Pharm. Ass., 1910, p. 49.

Notice of Judgment No. 221 relates to adulteration and misbranding of camphor.

The Committee of Reference in Pharmacy think that ingredients for camphor liniment should be ordered by weight and the preparation made in a closed vessel. An assay process is not necessary.—Brit. & Col. Drug., Lond., 1910, v. 58, p. 28.

Raubenheimer, Otto, points out that a great many of the foreign pharmacopœias direct the use of sesame oil in the preparation of camphor liniment.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1228–29.

Members of the Denver Branch of the A. Ph. A. suggest the substitution of olive oil for cotton seed oil now used in the making of camphor liniment.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 166.

Ferguson, G. A., thinks that the present method of making camphor liniment leads to excessive heating and the volatilization of much camphor. He favors the cold, circulatory displacement method.—*Ibid.* p. 93. See also Apothecary, 1910, v. 22, No. 2, p. 32.

Evans, J., recommends checking the amount of camphor in the finished product by an assay process which he outlines and asserts that there is no foundation for the statement often urged by the defense in cases under the Sale of Food and Drugs Act, that this preparation is liable to deterioration on keeping, owing to the volatility of the camphor. Even at summer heat it may be kept in an open bottle for three months without any appreciable loss of camphor.—Brit. & Col. Drug., Lond., 1910, v. 57, p. 132.

Table showing some of the analytical results reported in connection with camphor liniment.

Reporter.	Number of samples.		References.
	Examined.	Rejected.	
Alley, A. M	8	3	Proc. Am. Pharm. Ass. 1910, v. 58, p. 742.
Brown, Lucius P	18	14	Bull. Tennessee Food and Drugs Insp., 1910, p. 30.
Conn. Agric. Experiment Station.	208	107	Proc. Am. Pharm. Ass., 1910, v. 58, p. 742.
Howard, Charles D	6	5	Rep. New Hampshire Bd. Health, 1910, v. 21, p. 205.
Howard, C. G	1	1	New Hampshire San. Bull., 1910, v. 3, p. 182.
Potter, Hubert F	50	36	Rep. Connecticut Dairy and Food Com., 1910 Hartford 1911, pp. 127-129.
Sayre, L. E	1	0	Proc. Am. Pharm. Ass., 1910, v. 58, p. 1096.
Local Government Bd	504	48	Pharm. J., 1910, v. 30 (84), p. 33.
Local Government Bd., for Scotland.	20	1	*Ibid.* v. 31, (85), p 65.

Barker, Frederic, reports a fatal case of poisoning by camphorated oil in a baby 1 year 4 months old.—Brit. M. J., 1910, v. 1, p. 921.

Beythien and Simmich discuss some of the difficulties met with in the analysis of spirit of camphor.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 19, pp. 368–369.

Dohme and Engelhardt outline the Ph. Hung. III test for the spirit of camphor.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1191.

LaWall, Charles H., thinks that the specific gravity of spirit of camphor should be stated. He suggests a method for the determination of camphor which he thinks should be given in the Pharmacopœia.—Am. J. Pharm. 1910, v. 82, p. 25.

Meissner, F. W., reports that in Indiana spirit of camphor found to contain 90.8 per cent of alcohol was as illegal as if it was under.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 596.

Table showing some of the analytical results reported in connection with spirit of camphor.

Reporters.	Number of samples.		References.
	Examined.	Rejected.	
Beal, George D	22	14	Proc. Ohio Pharm. Ass., 1910, p. 73.
Brown, Lucius P	116	82	Bull. Tennessee Food and Drugs Insp., 1910, p. 30.
Howard, Charles D	11	7	Rep. New Hampshire Bd. Health, 1910, v. 21, p. 205.
Howard, C. G	1	1	New Hampshire San. Bull., 1910, v. 3, p. 182.
Jaffa, M. E	2	2	Bull. California Bd. Health, 1910, v. 6, p. 36.
Lythgoe, Hermann C	46	9	Rep. Massachusetts Bd. Health, 1910, p. 369.
Potter, Hubert F	10	6	Rep. Connecticut Dairy and Food Com., 1910, Hartford, 1911, p. 132.
Sayre, L. E	435	294	Proc. Am. Pharm. Ass., 1910, v. 58, p. 1096.
Sayre, L. E	11	4	Bull. Kansas Bd. Health, 1910, v. 6, p. 20.

Grollet (Rev. de Comp. Pathologie) reports the use of camphorated oil in the treatment of pneumonia in horses.—Am. Vet. Rev. 1910, v. 37, p. 540.

Yeager, Wm. H., states that camphor stands out prominently in homœopathic materia medica as the opposite of aconite. It is indicated in cases of diarrhœa in children when the child has very little or no reactionary force, makes a very poor fight and is quickly overcome by the disease.—Hahnemann. Month., 1910, v. 45, p. 368.

Grove, W. E., reports observations on the toxicity of dextro-, lævo- and inactive camphor.—J. Pharm. & Exper. Therap., 1909–10, v. 1, pp. 445–462.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 135–136) calls attention to a report by Höhne on the use of camphor to prevent the possible occurrence of post-operative peritonitis.

CAMPHORA MONOBROMATA.

Menge, George A., in a study of melting point determinations reports on five samples of camphor monobromated which were found to melt at from 75.50° to 76.20°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, p. 88. See also Proc. Am. Pharm. Ass., 1910, v. 58, p. 1042.

Eldred, Frank R., reports that twenty-five lots of monobromated camphor had melting points varying from 74° to 76°.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 891.

André and Leulier (Soc. Pharm. Paris, June 1, 1910) outline a method for the estimation of bromine in monobrom-camphor, based upon Schiff's observation that a solution of monobrom-camphor in toluene brought into contact with sodium forms a precipitate consisting of a mixture of sodium camphor and sodium bromide.—Am. chim. analyt. 1910, v. 15, p. 390.

Gane and Webster assert that physiological experiments are needed to ascertain just how much, if at all, this product is different in action from camphor itself. Authorities are at variance on the subject.—Drug Topics, 1910, v. 25, p. 37.

CANNABIS INDICA.

Schneider, Albert, calls attention to the structural characteristics of cannabis indica and states that it may be adulterated with staminate tops. It should not contain fertile seeds, according to the U. S. P., but seedless material is rare.—Merck's Rep., 1910, v. 19, p. 62.

Pearson, W. A., discusses the U. S. P. requirements for cannabis indica. He quotes a number of authorities regarding the impracticability of the present requirements and concludes that the Pharmacopœia should not give standards that can not be commercially reached.—Am. Druggist, 1910, v. 57, p. 235. See also Bull. Am. Pharm. Ass., 1910, v. 5, p. 537.

Rusby, H. H., states that cannabis indica as at present defined in the Pharmacopœia is the drug as used for centuries in India, and until the question of the permissibility of the presence of seeds has been definitely determined we are utterly at a loss in the revision of the physical standards for this drug.—Drug. Circ., 1910, v. 54, p. 619.

Beilstein, Christian, comments on the difficulty of securing true Indian cannabis and presents a letter from Lyster H. Dewey, botanist in charge of the Fiber Investigation, Department of Agriculture, who discusses the origin of the cannabis grown in the United States.—Proc. N. W. D. A., 1910, pp. 100–102.

Caesar & Loretz (Jahres-Ber., 1910, p. 34) point out that the export tax levied by the Indian Government on cannabis indica has brought about the substitution of the genuine by drugs of varying origin.

Pearson, W. A., says that it is a mooted question whether it is possible to obtain Indian cannabis without some developed seeds. Every lot examined by him has had some seeds present. The physiological tests, however, always make it possible to reject a sample that is not active.—Proc. Pennsylvania Pharm Ass., 1910, p. 136.

Butler, George F., states that hemp as grown in this country does not furnish the hashish which is yielded by the hemp grown in warmer latitudes.—N. York M. J., 1910, v. 92, p. 953.

Rusby, H. H., thinks that if the exclusion of the seeds is to be continued provision should be made by which an admixture of 5 per cent of them would not be condemned.—Drug. Circ., 1910, v. 54, p. 617. See also Practical Druggist, 1910, v. 27, p. 424.

Pearson, W. A., discusses the U. S. P. requirements of cannabis indica, and expresses the belief that the next edition of the U. S. P.

is certain to modify the present requirements and will probably allow a certain percentage of seeds, probably 5 per cent of the total weight.—Bull. Am. Pharm. Ass., 1910, v. 5, pp. 559–562.

Thome, E. R., thinks that the claims of some authorities that cannabis indica and cannabis americana can be used interchangeably should be investigated. He has seen American cannabis that was almost entirely free from resin and with slight physiological action only. The price of the latter is in its favor, especially for veterinarians.—Practical Druggist, 1910, v. 28, p. 122.

LaWall and Bradshaw report finding from 9.6 to 24.0 per cent ash in cannabis indica.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 751.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 7) report that an examination of the tops of female *Cannabis sativa,* grown in Greece, gives a much higher yield of resin than did the European-grown drug reported by them previously. In comparison with the Indian drug, they found the latter to vary in material soluble in 90 per cent alcohol from 10.08 to 13.92 per cent, while the Greek drug contained 13.20 per cent; the resin content of the Indian drug was from 6.92 to 9.92 per cent, while the Greek drug contained 9.76 per cent.

Dohme and Engelhardt state that the Ph. Hung. III directs that when Indian cannabis is extracted with alcohol it should yield 8 per cent of extractive matter.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1174.

Vanderkleed, C. E., reports 13 assays of cannabis indica, lowest 11.78 per cent, highest 15.45 per cent resin; all above standard.—Proc. Pennsylvania Pharm. Ass., 1910, p. 147.

Wood, H. C., Jr., in a report on physiological assay, discusses two methods that have been suggested for the standardization of cannabis indica.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 939–943.

The Executive Committee of the British Pharmaceutical Conference points out that standard strengths for the official preparations of Indian cannabis and processes for their determination, also the difference in yield of resin, cannabin, and cannabinol between the Guaza of Bombay, the Ganja of Calcutta, and other commercial varieties of cannabis, should be required. African Guaza is now coming into the market—a comparison of its properties with those of Indian cannabis would be of value.—Year-Book of Pharmacy, 1910, p. 297.

Gane, E. H., states that extract of cannabis indica should be evaporated in vacuo, as exposure to air during evaporation destroys a large proportion of the active constituents.—Drug Topics, 1910, v. 25, p. 228.

Dohme and Engelhardt state that the Ph. Hung. III directs that the extract of Indian cannabis be made with alcohol, adding dextrin to the finished product.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1178.

Knight, Henry G., reports the examination of 2 samples of extract of cannabis indica, 1 not passed.—Rep. Dairy, Food & Oil Com., Wyoming, 1910, p. 41.

Havenhill, L. D., outlines a modified formula for the tincture of Indian cannabis.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 786.

Osborne, Oliver T., thinks that cannabis indica is of such uncertain activity and strength that it would seem best to perpetuate only the preparations that are most likely to be of value: the fluid extract and the tincture. The extract is not needed.—J. Am. M. Ass., 1910, v. 54, p. 468.

CANTHARIS.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 15) point out that the Ph. Germ. V continues the requirement of 0.8 per cent of cantharidin and that the drying of cantharides should be effected at not exceeding 40°. The drug should not have an ammoniacal odor and should not yield more than 8 per cent of ash. They also discuss the assay process and express the belief that the cantharidin requirement, 0.8 per cent, is rather high.

Hartwich, C., points out that the requirement that cantharides is to be dried at not exceeding 40° is one that can not be complied with by the pharmacist. He also thinks that the cantharidin content requirement, 0.8 per cent, is rather high.—Apoth. Ztg., 1910, v. 25, p. 1045.

Davis, James E., reports that the microscopical examination of cantharides often shows presence of various kinds of beetles and bugs.—Proc. Michigan Pharm. Ass., 1910, p. 62.

Dohme and Engelhardt state that in the Ph. Hung. III 8 per cent of ash is permitted for cantharides.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1174.

LaWall and Bradshaw report finding 5.70 and 6.53 per cent ash in cantharides.—*Ibid.* p. 752.

Lyons, A. B., reports the requirement and method of assay for cantharides included in the Ph. Helv.—Am. Druggist, N. Y., 1910, v 56, p. 102.

Caesar & Loretz (Jahres.-Ber., 1910, pp. 65–68) call attention to some of the recent work on the quantitative estimation of cantharidin and present a table showing a comparison of the results obtained by several methods. See also *Ibid.* pp. 79–81.

Klein, Fred., outlines a test for the differentiation of alkaloids, especially cantharidin by the use of concentrated sulphuric acid and trace of sodium selenite.—J. Ind. & Eng. Chem., 1910, v. 2, p. 389.

Caesar & Loretz (Jahres.–Ber., 1910, p. 4) announce an improvement in their method for determining the cantharidin content of cantharides.

Colledge, W. C., presents a note on cantharidin in different species of cantharides.—Pharm. J. 1910, v. 30, (84), p. 674.

Havenhill, L. D., outlines a modified formula for the tincture of cantharides.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 786.

Scoville, Wilbur L., reports experiments on the making of tincture of cantharides and the menstruum used. He concludes that the U. S. P. tincture does not represent 10 per cent of a good drug even when prepared with exceptional care and that an acid menstruum is much better than a neutral one for the extraction of cantharides.—*Ibid.* pp. 1115–1117.

Remington, Joseph P., thinks it will not be satisfactory to introduce an acetic menstruum for cantharides.—*Ibid.* p. 1117.

Halberg, C. S. N., asserts that cantharides is an acid and forms soluble salts with alkali and there should be therefore no difficulty in complete exhaustion by the use of an alkaline menstruum.—*Ibid.* p. 1117.

Mittelbach, Wm., believes that cantharidal collodion is readily made extemporaneously and might well be transferred to the National Formulary.—Proc. Missouri Pharm. Ass., 1910, p. 98.

Gane and Webster point out that as it is now definitely known that the vesicant properties of the beetle are due to cantharidin; this pure definite compound should replace the beetles in all pharmaceutical preparations thereof. Cantharidin is slightly soluble in water, alcohol, ether and fixed oils, more so in acetic ether, and freely in chloroform. It is possible by using it in place of the beetles to obtain more reliable and uniform products.—Drug Topics, 1910, v. 25, p. 37.

Fornias, E., quotes Wassily who points out that cantharides acts especially on the urinary tract and all its diseases, with the greatest degree of irritation.—Hahnemann, Month. 1910, v. 45, p. 552.

CAPSICUM.

Schneider, Albert, states that the cells of capsicum are very characteristic in form and are colored from yellowish to bright reddish. The most common adulterant is corn meal with curcuma; also pea meal, wheat and rye flour, bran, starches, mustard, sawdust, mineral substances, etc.—Merck's Rep., 1910, v. 19, p. 62.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 36) point out that the Ph. Germ. V restricts the ash content of capsicum to a maximum of 6.5 per cent.

Dohme and Engelhardt state that the Ph. Hung. III directs that capsicum should yield not more than 5 per cent of ash.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1174.

Gane and Webster think a limit of ash should be fixed for capsicum. A fair amount would be not in excess of 6 per cent.—Drug Topics, 1910, v. 25, p. 37.

LaWall and Bradshaw report finding from 4.4 to 5.75 per cent ash in capsicum.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Nelson, E. K., describes a method for the determination of capsaicin, the pungent principle of capsicum, and discusses the detection of capsicum in preparations of ginger.—J. Ind. & Eng. Chem., 1910, v. 2, pp. 419–421.

Rusby, H. H., states that he has met with powdered capsicum which was powdered paprika; also powdered capsicum consisting largely of corn-cob.—Practical Druggist, 1910, v. 27, p. 424.

Brown, Linwood A., points out that capsicum depends upon its oleoresin for its medicinal properties, and should be kept in well closed containers, in a cool dry place.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 131.

Vanderkleed, C. E., reports 7 assays of capsicum, lowest 15.10 per cent, highest 22.27 per cent oleoresin; all above standard.—Proc. Pennsylvania Pharm. Ass., 1910, p. 147.

Eldred, Frank R., reports that 48 lots of capsicum yielded from 11 per cent to 26 per cent of ether soluble oleoresin (dried for 1 hour on a water bath), the average being 18 per cent.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 891–892.

Rippetoe, John R., has examined samples of capsicum for alcoholic extract, and has found several that contained less than 12 per cent, while an average sample should contain at least 20 per cent; showing a possible partial removal of the alcohol soluble matter. It would seem desirable to have an alcoholic extract standard or some such test for this drug.—*Ibid.* p. 1060.

Havenhill, L. D., outlines a formula for the tincture of capsicum.—*Ibid.* p. 787.

Sayre, L. E., reports on 4 samples of tincture of capsicum: 2 passed; 2 illegal.—*Ibid.* p. 1096.

Osborne, Oliver T., thinks it is doubtful if the fluid extract of capsicum is needed.—J. Am. M. Ass., 1910, v. 54, p. 291.

CARBO ANIMALIS.

Gane and Webster point out that animal charcoal is not a medicinal substance in any sense of the term and is, therefore, out of place in the Pharmacopœia.—Drug Topics, 1910, v. 25, p. 37.

Utley, John Henry, in U. S. patent 947,503, describes and illustrates a process of purifying animal charcoal.—J. Ind. & Eng. Chem., 1910, v. 2, pp. 111–112.

CARBO LIGNI.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5, [1910], 1911, p. 16) point out that the Ph. Germ. V requires that powdered wood charcoal leave not more than 5 per cent of ash on incineration.

Hartwich, C., thinks that the Ph. Germ. V ash limit for wood charcoal is unnecessarily high.—Apoth. Ztg., 1910, v. 25, p. 1045.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 22) report that out of 17 samples of charcoal examined only 9 complied with the Ph. Brit. ash limit of 7.5 per cent. These varied from 2.6 to 7.5 per cent, the other samples leaving up to 10 per cent of ash.

Gane and Webster point out that it is probable that the internal administration of wood charcoal does more harm than good. It is administered largely upon the idea that it will absorb intestinal gases and so relieve flatulent indigestion. Those who so prescribe it overlook the fact that its absorbent power ceases when the powder is moistened, only the dry powder possessing this property. It will probably be a long time, however, before this fallacy will be eradicated. The Pharmacopœia provides no ash limit for wood charcoal; this should not exceed 8 per cent. "Soft wood is described as the source of the official charcoal, but it would be better to specify the varieties allowable. The poplar, willow, oak, beech and other woods are all used as sources and not all of these come under the heading of "soft" woods.—Drug Topics, 1910, v. 25, p. 37.

Fornias, E., quotes Wassily who points out that carbo vegetabilis acts chiefly on stomach and bowels.—Hahnemann. Month. 1910, v. 45, p. 552.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 138–139) calls attention to observations made by Muck on the use of carbon in suppuration.

CARBON DIOXIDE.

Déoune, L. J. B., in French patent 413,777, March 12, 1910, outlines a method for the manufacture of carbon dioxide by combustion of carbon.—J. Soc. Chem. Ind., 1910, v. 29, p. 1105.

Behrens and Behrens, in French patent 416,498, May 28, 1910, outline a process for separating carbonic acid from gaseous mixtures containing it.—*Ibid.* p. 1379.

Behrens, Ernst August, in U. S. patent 960,788, describes and illustrates a process for the manufacture of carbonic acid.—J. Ind. & Eng. Chem., 1910, v. 2, p. 368.

Tousey, Sinclair, describes a blotting paper mold for obtaining crayons of carbonic acid ice.—J. Am. M. Ass., 1910, v. 54, p. 1519.

An editorial (Drug Topics, 1910, v. 25, p. 146) points out that solid carbon dioxide is rapidly replacing other therapeutic agents as a caustic. See also *Ibid.* pp. 162–163.

The Editor of the Therapeutics Column (J. Am. M. Ass., 1910, v. 55, p. 314) discusses the preparation and use of solid carbon dioxide, with a brief bibliographic list.

An unsigned note (Pharm. J. 1910, v. 30, (84), p. 635) comments on the remarkable development in the application of solid carbon dioxide in therapeutics, and calls attention to a recent article in *The Lancet* by E. R. Morton.

Varney, Henry R., states that in many of the small benign growths and in nævi, especially of certain depth, in lupus erythematosus and lupus vulgaris, treatment by carbon dioxide snow is excelled by no other means of medication or operation.—J. Am. M. Ass., 1910, v. 55, p. 1585.

Stelwagon, Henry W., discusses the use of carbon dioxide snow in certain cutaneous diseases.—Therap. Gaz., 1910, v. 34, pp. 538–540.

Macleod, J. M. H., reports on the therapeutic value of carbon dioxide snow in the treatment of vascular nævi, moles, etc.—Brit. M. J., 1910, v. 1, pp. 254–257, 351, 1411, 1516.

Ochs, Benj. F., reports three cases in which neuralgia followed the use of solid carbon dioxide; one, lupus of the cheek; one, lupus of the upper lip; one, nævus of the upper lip.—Med. Rec. N. Y., 1910, v. 78, p. 502.

Morton, Edward Reginald, reports some results obtained from the local application of solid carbon dioxide.—Brit. M. J., 1910, v. 1, p. 257. See also Lancet 1910, v. 178, p. 1268 and *Ibid.* v. 179, pp. 130, 198, 258. See also *Ibid.* p. 1840 for illustration of apparatus.

Bernstein, Ralph, describes and illustrates the method of using solidified carbon dioxide in the treatment of epithelioma.—Hahnemann. Month., 1910, v. 45, pp. 491–505, and pp. 758–770.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 240–241) calls attention to a number of contributions on the use of liquid carbon dioxide in the form of carbon dioxide snow as a local anæsthetic and as a caustic.

See also J. Am. M. Ass. and Index Medicus.

CARBONEI DISULPHIDUM.

Gane and Webster remark that they do not know who is responsible for the "Carbonei" in the title "Carbonei disulphidum," but earnestly hope this monstrosity will be put out of its misery and the simpler and more accurate "Carbonis" accepted. As its only use in pharmacy is as a solvent and it has no medicinal uses, it should not be retained. It is introduced only as an aid in preparing a plaster and the appendix is the proper place for this class of substances.—Drug Topics, 1910, v. 25, p. 68.

CARDAMOMUM.

Gehe & Co. (Handels-Bericht 1910, p. 69) point out that the marked reduction in the export of cardamom from Ceylon indicates the further decrease in the cultivation of this spice, due to the increase in the cultivation of tea.

An editorial (Brit. & Col. Drug., Lond., 1910, v. 58, pp. 417–418) in discussing the cardamom market, presents statistics on the exports of cardamom from Ceylon and the production in Ceylon from the year 1880 to 1910.

Magelssen, William C., reports that a statement issued by the Ceylon Chamber of Commerce shows 56,280 pounds of cardamoms shipped to the United States in 1909, as against 7,681 for 1908.—Cons. & Tr. Rep. Feb. 28, 1910, p. 4.

Heinrich Haensel (Bericht, October–March 1909–10, pp. 16–17) reports that the importation of cardamom into Hamburg has steadily decreased, from 1500 cases in 1906 to 770 cases in 1909. The amount of cardamom on hand at Hamburg in December 1909 was 200 cases against 340 cases in December 1908.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 29) reproduce an abstract discussing the cultivation of cardamom in Ceylon.

Schneider, Albert, calls attention to the structural characteristics of cardamom and states that this drug is not generally adulterated.—Merck's Rep., 1910, v. 19, p. 62.

Rusby, H. H., thinks acceptable cardamom should contain not less than 70 or 75 parts of seed to 25 or 30 parts of pericarp or hull. Yet these pods are often so poorly filled that the percentage of seeds is not more than half of the whole.—Drug. Circ., 1910, v. 54, p. 617. See also Practical Druggist, 1910, v. 27, p. 424.

Gane and Webster assert that the seeds only of cardamom should be recognized, as the papery pericarp is devoid of all medicinal properties.—Drug Topics, 1910, v. 25, p. 68.

Beilstein, Christian, reports that a lot of decorticated cardamom seed was found to consist of the seed of the wild cardamom, which is a very inferior drug.—Proc. N. W. D. A., 1910, p. 105.

LaWall and Bradshaw report finding from 3.7 to 7.9 per cent ash in cardamom seed.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Havenhill, L. D., outlines a modified formula for the tincture of cardamom.—*Ibid.* p. 787.

Beringer, George M., discusses cardamom and oil of cardamom, and describes the latter at some length.—Am. J. Pharm. 1910, v. 82, pp. 167–175.

Schimmel & Co. (Semi-Annual Report, October 1910, pp. 31–33) discuss the requirements for oil of cardamom proposed by Beringer, and report that they have found oils of their own distillation to range in values as follows: specific gravity 0.923 to 0.941; optical rotation +24° to +39°; index of refraction at 20°, 1.461 to 1.467; acid number up to 4.0; ester number 94 to 150; soluble in 2 to 4 volumes and more of 70 per cent alcohol. Once only have they met with an oil which required 5 volumes of 70 per cent alcohol to make a solution. This oil had the high saponification number 142.

Heinrich Haensel (Bericht, April–September 1910, p. 12) presents a table giving the specific gravity and polarization of oil of cardamom and of the terpine-free oil of cardamom.

Allen, E. Watlock, recommends that oil of cardamom be made official.—Pharm. J. 1910, v. 30, (84), p. 317.

Remington, Joseph P., believes that cardamom is used on account of the flavor, and does not think that any attempt to replace the official cardamom fruit by the oil would meet with the approval of physicians. He asserts that essential oils are largely adulterated, and prone to deterioration, especially under the varying conditions under which they are kept in pharmacies throughout the country.—Am. J. Pharm., 1910, v. 82, p. 249.

CARUM.

Heinrich Haensel (Bericht, April–September 1910, pp. 29–31) discusses the outlook for caraway. He also presents a table showing the production of caraway in Holland from 1906–1909. See also *Ibid.* October–March 1909–10, pp. 30–32.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 36) point out that the Ph. Germ. V permits a maximum ash content of 8 per cent in caraway.

LaWall and Bradshaw report finding 7.8 per cent ash in caraway seed.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

The Pharmaceutical Era says that caraway seed has been offered practically free from oil.—*Ibid.* p. 743.

CARYOPHYLLUS.

Fichtenholz, A., quotes Tschirch as authority for the statement that caryophyllus is apparently derived from the Sanscrit, *Katukaphala.*—J. pharm. et chim. 1910, v. 2, p. ii.

The Daily Consular and Trade Reports (October 5, 1910, p. 60) notes the exports declared for the United States during the three months ended Jan. 30, 1910, from Netherlands India, via Batavia, 22,407 pounds of cloves.

Rairden, B. S., reports 1,632 pounds of cloves exported from Netherlands Indies to the United States during the three months ended September 30, 1909.—*Ibid.* Feb. 23, 1910, p. 7.

Tunmann, O., presents a review of the clove market and estimates that the annual consumption is about 7,000,000 to 8,000,000 kg., supplied almost entirely from plants cultivated on the island of Pemba and Zanzibar; in the latter Island the cultivation was introduced in 1830. The consumption of clove stem is also increasing rapidly, largely for use in the production of oil of cloves.—Apoth. Ztg., 1910, v. 25, p. 717.

Schimmel & Co. (Semi-Annual Report, October 1910, pp. 38–39) discuss the yield of cloves during the years 1905 to 1909; also present an abstract from a paper by R. N. Lyne, director of Agriculture in Zanzibar, regarding the history of cloves.

Roure-Bertrand Fils (Sc. & Ind. Bull., April 1910, p. 70) report that the harvest of cloves from Zanzibar was not all that could be desired.

Harris, Wm., states that the cloves tree was brought to Jamaica by Thomas Clark in 1789 but is not a hardy tree and requires good soil in warm, moist and sheltered situations so that it has not become plentiful in Jamaica.—Bull. Dept. Agric., Jamaica, v. 1, No. 3, p. 183.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5, [1910], 1911, p. 16) point out that the Ph. Germ. V requires that cloves be derived from *Jambosa caryophyllus* (Sprengel) Niedenzu, and outlines microscopical descriptions for both the whole and powdered drug. The maximum ash content is 0.8 per cent and the requirement is made that cloves float upright in water or sink.

Hartwich, C., points out that the Ph. Germ. V has changed the name of the plant from which cloves are derived from *Eugenia aromatica* to *Jambosa caryophyllus.* He thinks the description of the drug is quite satisfactory.—Apoth. Ztg., 1910, v. 25, p. 1045.

LaWall and Bradshaw report finding from 5.3 to 6.4 per cent ash in cloves.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Rusby, H. H., suggests that the limit of clove stalk in cloves should be fixed not to exceed 5 per cent. He has met with whole cloves in which not a single clove could be found, the whole being clove stalks.—Drug. Circ., 1910, v. 54, p. 617. See also Practical Druggist, 1910, v. 27, p. 424, and Proc. Am. Pharm. Ass., 1910, v. 58, p. 743.

Schneider, Albert, states that no spice is more commonly adulterated than cloves. Clove stems are imported in large quantities as an adulterant. The drug may also be adulterated with olive pits, nut shells, allspice stems, and other vegetable substances. A pure article (5 per cent stems or less) rich in oil is indeed rare.—Merck's Rep., 1910, v. 19, p. 62.

Jaffa, M. E., reports the examination of 1 sample of cloves: illegal.—Bull. California Bd. Health, 1910, v. 6, p. 21.

Thain, L. L., commends powdered cloves in keratin covered capsules, in senile flatulence.—Lancet, 1910, v. 179, p. 1306.

CASSIA FISTULA.

According to "Le Pharmacie Française," cassia fistula is popularized in Molière's comedies, and Delille, the poet, assures us "prolonged the age of Voltaire."—Chem. & Drug. 1910, v. 76, p. 5.

CATAPLASMA KAOLINI.

Gane and Webster assert that cataplasm of kaolin is a relic of barbarism which should never have been allowed in the U. S. P. They suggest that its use by physicians in pneumonia probably accounts for the increased mortality from this disease in late years. Kaolin varies greatly in absorptive power and some samples require more glycerin than is officially permitted to make a mass of proper consistence. A better and more uniform product could be secured by using purified talcum in place of kaolin.—Drug Topics, 1910, v. 25, p. 68.

Hommell, Philemon E., comments on the difficulties that have been encountered in the making of cataplasm kaolini and presents the improved formula by J. A. Dunn which he has used for some time. He thinks that cataplasma kaolini should be retained in the U. S. P., as it is not only a suitable substitute for advertised preparations, but a valuable antiphlogistic agent with a wide range of use in the field of therapeutics.—Proc. New Jersey Pharm. Ass., 1910, p. 51.

Mittelbach, Wm., reports that cataplasma kaolini is all right when freshly made as called for. It is then not necessary to heat the kaolin.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 792.

The members of the New England Branch of the A. Ph. A. think that boric acid should be omitted from cataplasm of kaolin because water is liberated by the reaction between glycerin and the acid.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 150.

CERA ALBA.

The Committee of Reference in Pharmacy thinks that white wax should be required to correspond to the tests for yellow wax. Compare Report, 1908, p. 19.—Brit. & Col. Drug., Lond., 1910, v. 58, p. 29.

Lucas and Bird, point out that it does not seem feasible to distinguish between air bleached and chemically bleached wax and it is doubtful if any of the former is now prepared. For detecting paraffin, they recommend a modification of Weinwurm's reaction which they assert is an excellent test, not only for hydrocarbons, but for most other waxes.—*Ibid.* p. 315. See also Pharm. J. 1910, v. 31 (85), pp. 470–471.

Dohme and Engelhardt state that in the Ph. Hung. III the acid number for white wax is given as 19 to 25, and the ester number as 68 to 75. The specific gravity should be .966 to .970 and the melting point 64° to 65°.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1174.

Hemm, Francis, asserts that both white and yellow beeswax are still in active employment and will need to be continued in the U. S. P. IX.—Proc. Missouri Pharm. Ass. 1910, p. 99.

Mittelbach, Wm., reports that cera alba is satisfactory.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 792.

Sayre, L. E., reports on 13 samples of white wax; all illegal.—*Ibid.* p. 1098.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 6) report that 4 samples of white beeswax have been tested in the usual way, the results being normal and again showing that the acid value for bleached wax is usually higher than that of the yellow wax. The specific gravity ranged from 0.9570 to 0.9690; melting point, 62.5° to 64.0°; acid value, 19.7 to 21.7; saponification value from 89.7 to 98.6.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 12) report that 18 genuine samples of white wax had values within the limits, as follows: acid value, 19 to 24; ester value, 73 to 78; saponification value, 97 to 100; specific gravity, 0.962 to 0.972; melting point 62.5° to 63.5°.

CERA FLAVA.

The Bulletin of the Imperial Institute (Vol. VIII, 1, p. 23) discusses the production of beeswax.—Abstracted in Chem. & Drug. 1910, v. 77, p. 627.

A news note (Chem. & Drug. 1910, v. 77, p. 123) states that the exports of beeswax from Chinde, Portuguese East Africa, amounted to 49 tons in 1908, it being shipped to Germany.—See also *Ibid.* p. 602.

Xrayser II comments on the sources of "dubious" beeswax.—*Ibid.* p. 513.

Dohme and Engelhardt state that the Ph. Hung. III directs that yellow wax should have a specific gravity of 0.962 to 0.966, melting point, 63° to 64°; acid number, 19 to 23; ester number, 68 to 75. A very circumstantial method is given for the determination of the specific gravity.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1174.

Hartwich, C., discusses the Ph. Germ. V monograph for wax, and points out that the Buchner number has been included. He also points out that for yellow wax the presence of ceresin derived from the frequently used, artificial honey-comb foundation is specifically inhibited.—Apoth. Ztg., 1910, v. 25, p. 1046.

Jacobsen, C., reports a study of commercial wax, and gives the constants observed by him for various mixtures of wax with ceresin and other adulterants.—*Ibid.* p. 113.

Rippetoe, John R., points out that in determining the saponification value of yellow wax in the presence of paraffin adulteration, the heating should be done by boiling at least one hour with the flask connected with a return condenser, otherwise the value found is likely to be too low and variable, owing to incomplete saponification.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1060.

Dunning, H. A. B., thinks that the test directing the heating of yellow wax with sulphuric acid for the purpose of detecting paraffin or ceresin should be eliminated or modified. Twenty per cent paraffin can scarcely be detected by the test, for the carbonized wax holds the paraffin and prevents its separation. However, if black residue, after heating with sulphuric acid, be washed and dried and extracted with chloroform, or some other suitable solvent, then on evaporation paraffin or ceresin will be obtained.—*Ibid.* p. 970.

Hill, Charles Alex., discussing cera, asserts that the refractive index (taken at 80°) is a useful analytical factor, since the figure for beeswax, about 1.44, differs sharply from that of ceresin about 1.43.—Pharm. J., 1910, v. 31 (85), p. 780.

Bohrisch and Kürschner discuss the saponification of wax.—Pharm. Zentralh. 1910, v. 51, pp. 549–556, 588–593.

Buchner, Georg, reviews some of the recent contributions on the chemistry of wax and calls attention to two samples of yellow wax recently brought to his attention which showed abnormal qualities but were undoubtedly pure.—Ztschr. öffentl. Chem., 1910, v. 16, pp. 128–131.

Dieterich, Karl, presents a further contribution to our knowledge of the resin of wax (Propolis).—Pharm. Zentralh. 1910, v. 51, pp. 867–873. See also Pharm. Ztg. 1910, v. 55, p. 771.

Gane and Webster assert that beeswax is probably more frequently adulterated than any other single substance and the tests should be extended so as to include all possible adulterants. In addition to the saponification figures, limits should also be placed on the acid and ester numbers, which are valuable for determining the purity of the article. The sulphuric acid test is liable, in inexperienced hands, to give fallacious results, and a more detailed process should be given.—Drug Topics, 1910, v. 25, p. 68.

Lucas and Bird present a proposed monograph for yellow beeswax to be included in the Ph. Brit. They give the specific gravity as varying from 0.958 to 0.970, and the melting point as varying from 61° to 64°. Not more than 1 per cent should be soluble in boiling water.—Brit. & Col. Drug., Lond., 1910, v. 58, p. 316.

Southall Bros. & Barclay (Rep. 1910, Birmingham 1911, p. 6) report that 6 samples of yellow beeswax examined show remarkably little variation.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 13) report that about 56 samples of yellow beeswax were tested, having values within the usual limits, acid value, 18 to 22; ester value, 71 to 79; saponification value, 90 to 99; specific gravity, 0.960 to 0.970; melting point, 62° to 65°; iodine value, 6 to 14. They report on a number of exceptional samples, and point out that the maximum saponification value is most conveniently obtained, either by a distillation to dryness with N/2 potash, or by refluxing for an hour directly over a heated asbestos plate rather than on a water bath. They found Weinwürm's test a very sensitive one for paraffin, a slight turbidity at times being obtained from adherent traces from the moulds when the other figures gave no indication whatever.

Gehe & Co. (Handels-Bericht 1910, p. 56) point out that it is generally recognized to be extremely difficult to secure an absolutely pure unadulterated beeswax. Many adulterations are purely accidental while others occur from the use of artificial foundations for the honey-comb.

Davis, James E., reports that beeswax is often found adulterated with paraffin and ceresin, and also artificially colored.—Proc. Michigan Pharm. Ass., 1910, p. 64.

Whitney, D. V., reports that the four samples of yellow wax examined showed specific gravity of 0.926, 0.934, 0.956 and 0.873. Proc. Missouri Pharm. Ass. 1910, p. 108.

Sayre, L. E., reports on 3 samples of yellow wax: 2 passed; 1 illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1098.

Beal, James H., thinks that a considerable per cent of the adulteration of yellow wax is by the producer or by the person supplying the jobber, and that the jobber is remiss in not more carefully examining the samples.—Proc. Missouri Pharm. Ass., 1910, p. 17.

The Local Government Board (38th Ann. Rep. Part II) reports 23 samples of wax examined in 1908, 1 not standard.—Pharm. J., 1910, v. 30, (84) p. 33.

CERATA.

Mittelbach, Wm., reports that camphor, cantharides and the subacetate of lead cerates, made according to the formulas of the 1880 Pharmacopœia, are better products than those of the last two revisions. The old and tested formulas of the two resin cerates are good.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 792.

Gane and Webster think the addition of petrolatum to several of the cerates was not a wise one. While they will keep better with this addition, this ought not to be an excuse for making an inferior product. When used as an application to burns or painful wounds the presence of petrolatum increases the pain. The 1890 formula for simple cerate should be readopted with modified instructions.—Drug Topics, 1910, v. 25, p. 68.

Osborne, Oliver T., thinks it is doubtful if the acetate of lead cerate, the resin cerate, and the compound resin cerate are needed. If they are but little used by physicians, surgeons or specialists they should be omitted from the next Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 51.

CERATUM CAMPHORÆ.

Gane and Webster assert that camphor cerate is seldom prescribed and is not needed in the U. S. P.—Drug Topics, 1910, v. 25, p. 68.

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA

CERATUM CANTHARIDIS.

They think that blistering cerate should be replaced by a more elegant preparation, made either from cantharidine or from a standardized extract.—Drug Topics, 1910, v. 25, p. 68.

CERATUM RESINÆ.

Gane and Webster think there is no necessity for both rosin cerate and compound rosin cerate. They are used for the same purposes and could with advantage be combined, by simply adding 10 per cent of turpentine to the simpler preparation or by using balsam of fir in place of the resin.—Drug Topics, 1910, v. 25, p. 68.

Sayre, L. E., reports on 1 sample of rosin cerate: illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1098.

CERII OXALAS.

Browning and Roberts report observations on the substitution of bromine and of iodine for chlorine in the separation of cerium from the other cerium earths.—Am. J. Sc., 1910, v. 29, pp. 45–46.

Metzger and Heidelberger discuss the volumetric determination of cerium in cerite and monazite.—J. Am. Chem. Soc., 1910, v. 32, pp. 642–644.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 21) report that 3 samples of cerium oxalate examined left between 47.3 and 48.5 per cent of ash, the dark reddish-brown character of which indicated the presence of didymium, and probably other rare earths, in each case. Iron, aluminium, and zinc were however not detected at all. The most probable formula is $Ce_2(C_2O_4)_3\ 10\ H_2O$.

Gane and Webster point out that commercial cerium oxalate is of very varying composition and only when especially ordered is it possible to obtain a pure salt. The claims originally made for cerium oxalate have not been confirmed by later therapeutists, and the article would never have obtained official recognition had it been advocated by a lesser light than James Simpson. The best authorities at the present time regard it as being of less value than bismuth salts.—Drug Topics, 1910, v. 25, p. 68. See also Proc. Am. Pharm. Ass., 1910, v. 58, p. 743.

Coblentz, Virgil, asserts that some sections of the country demanded that cerium oxalate be dropped, because it is a useless chemical, while others stoutly maintained that it is extensively prescribed and needs a standard. Upon examination he found commercial specimens to contain about 40 per cent of cerium, the balance (60 per cent) consisting of didymium, lanthanum and other rare earths of this group. Really it is not entitled to be called cerium; since the revision, experiments have demonstrated that cerium oxalate is absolutely without medicinal action.—Proc. Maine Pharm. Ass., 1910, p. 43.

Osborne, Oliver T., thinks cerium oxalate is a much over-lauded and over-estimated sedative. It is an insoluble salt, and the powdered drug often contains hard crystals. It is possible that irritation from it may stimulate to normal secretion an anæmic stomach. He thinks it is not needed in the next Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 208.

CETACEUM.

An editorial note (Chem. & Drug. 1910, v. 76, p. 479) discusses the antiquity of spermaceti, which has been traced back to the school of Salerno at about 1100, though this school is said to have confounded it with ambergris. See also *Ibid.* p. 539. and Pharm. J. 1910, v. 30, p. 385.

Kirkby, William, contributes an interesting historical note on spermaceti, the earliest authentic reference he considers to be Clusius, 1605.—Pharm. J. 1910, v. 30, p. 511.

Schelenz, Hermann, presents an outline of the history of spermaceti.—Chem. Ind. 1910, v. 33, pp. 421–424. See also Am. Druggist, 1910, v. 56, p. 274.

Lucas and Bird assert that spermaceti is probably derived from various species of whale, and propose to omit the historical reference to *Physeter macrocephalus.* They also point out that the limit of acidity in the Ph. Brit. is altogether too high, as even very old samples do not rise much above 5 per cent. Spermaceti appears to be remarkably pure, and it cannot very well be adulterated without altering its physical characters. They suggest a limit in the melting point to from 43° to 50° and a specific gravity of from 0.350 to 0.960.—Brit. & Col. Drug., Lond., 1910, v. 58, pp. 315, 316. See also Pharm. J., 1910, v. 31 (85), pp. 470, 471.

Dohme and Engelhardt state that the Ph. Hung. III directs that the melting point for spermaceti be 47°. The acid number should be not more than 1, and the iodine number between 6 and 7; 5 gm. of spermaceti should be taken for the determination of the latter.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1174.

Hartwich, C., thinks that the Ph. Germ. V melting point for spermaceti (45° to 54°) is rather high.—Apoth. Ztg., 1910, v. 25, p. 1052.

Gane and Webster report that commercial spermaceti does not comply strictly with the official requirements, being usually lower both in specific gravity and melting point. This is not due to adulteration, but to the fact that the sperm oil has not been completely removed. For this reason the U. S. P. test for the presence of added stearic acid will often give fallacious results. In the official tests a saponification figure should be given, also an iodine number to limit the amount of oil permissable. Pure spermaceti should give no iodine number, whereas the commercial article will give an iodine number as high as 7 to 8. The melting point is also a trifle high; 43° to 47° would more nearly represent the article usually marketed.—Drug Topics, 1910, v. 25, p. 68. See also Proc. Am. Pharm. Ass., 1910, v. 58, p. 747.

Hemm, Francis, asserts that spermaceti still finds wide use in the preparation of certain useful ointments and cerates.—Proc. Missouri Pharm. Ass., 1910, p. 99.

Mittelbach, Wm., reports that cetaceum is all right.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 792.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 71) report that genuine samples of spermaceti have varied in specific gravity from 0.950 to 0.960; saponification value, 123 to 129; melting point, 43° to 47°. A sample of Californian spermaceti gave a specific gravity of 122.5; iodine value (Wij) 3.5; melting point, 45°. An adulterated sample gave a specific gravity of 0.922; saponification value, 100; melting point, 45°; paraffin being present.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 16) report that samples of spermaceti gave uniformly satisfactory results: melting point, 45°–47°; saponification value, 122.6 to 125.4.

CHIMAPHILA.

LaWall and Bradshaw report finding 3.2 per cent ash in chimaphila.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Gane and Webster characterize chimaphila as an Indian herb-remedy which is now generally recognized as having no important medicinal properties. It should be dropped from the Pharmacopœia.—Drug Topics, 1910, v. 25, p. 69.

Osborne, Oliver T., asserts that chimaphila and its fluid extract might well be omitted from the Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 377.

Turner, Maurice W. (New England Med. Gaz.) reports lasting benefit from chimaphila, after other remedies had been tried, in a man aged 90, who had prostatic enlargement and irritation.—J. Am. Inst. Homœop. 1910, v. 2, p. 250.

CHIRATA.

Gane and Webster assert that chirata is the bitterest of the purely bitter drugs and therefore very little used. It has no advantages over gentian and its objectionable taste will ever prevent its coming into greater use.—Drug Topics, 1910, v. 25, p. 69.

Osborne, Oliver T., thinks that chirata and its fluid extract should not be in the Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 209.

CHLORALFORMAMIDUM.

Menge, George A., in a study of melting point determinations reports a sample of chloral-formamide which was found to melt at from 116.4° to 117.2°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 88–89. See also Proc. Am. Pharm. Ass., 1910, v. 58, p. 1042.

Mittelbach, William, declares that chloralformamide is very rarely mentioned in our literature and he believes it is used still less.—Proc. Missouri Pharm. Ass., 1910, p. 98.

CHLORALUM HYDRATUM.

The Committee of Reference in Pharmacy recommends that the boiling point and isonitrile test for chloral hydrated be omitted. It should melt at 49°–53°. (Compare Report, 1908, p. 20.)—Brit. & Col. Drug., Lond., 1910, v. 58, p. 29.

Böeseken, J., discusses the chemical composition and the analysis of chloral.—Chem. Weekblad, 1910, v. 7, pp. 121–132.

Elvove, Elias, outlines a general mode of procedure applicable to the assay of chloral.—Am. J. Pharm. 1910, v. 82, pp. 403–409.

Puckner and Warren outline a method for the estimation of hydrated chloral in mixtures.—Rep. Chem. Lab. Am. M. Ass., 1910, v. 3, p. 73.

Gane and Webster assert that a test for chloral alcoholate is needed to take the place of the one entitled in the ''additions and corrections'' of May 1, 1907. The iodoform test, official in the Ph. Brit. is useful in this connection.—Drug Topics, 1910, v. 25, p. 69.

Cohn, Georg, discusses the chemistry of some of the combinations of chloral and butylchloral.—Pharm. Zentralh. 1910, v. 51, pp. 655–667, 678–686.

Schär, Ed., presents some observations on the utilization of concentrated chloral hydrate solutions for pharmaceutical and analytical purposes.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 617–618.

Sayre, L. E., reports on 8 samples of hydrated chloral: 5 passed; 3 illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1096.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 17) report that the melting points of 20 samples of butyl chloral hydrate fell between 74.5° and 78°. This substance has occasionally a feebly acid reaction to litmus.

Brown, Linwood A., points out that chloral hydrate is quite readily volatile at the ordinary temperature of a drug store, and its aqueous solution rapidly decomposes. Decomposition is greatly hastened by the presence of alkaline substances.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 138.

Brady, William, comments on the rapid absorption (5 minutes sometimes) of chloral hydrate, and suggests that patients be warned lest they fall asleep before reaching the bed. As a hypnotic he thinks it more satisfactory than the newer products, whose exploiters have grossly libeled chloral to stimulate the sale of their own products.—N. York M. J., 1910, v. 91, p. 211.

Saradschian, Alexander, reports a number of experiments with hydrated chloral and urethane to determine the mutual pharmacologic influence of two narcotics of the fatty series. He concludes that in combination these two substances are less efficient than when given singly.—Ztschr. exper. Path. u. Therap., 1910, v. 8, pp. 536–544.

An abstract (Medical Review of Reviews, Jan. 1910) calls attention to several recent articles endorsing the use of hydrated chloral as a local application.—Therapist, Lond., 1910, v. 20, p. 43.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 139–141) in a review of the literature of 1910 relating to hydrated chloral, states that of the various substances recommended for commencing chloroform anæsthesia, chloral hydrate deserves our fullest attention.

For additional references on the chemistry, pharmacology and uses of chloral and related products see Chem. Abstr., Zentrlbl. Biochem u. Biophysik., J. Am. M. Ass., and Index Medicus.

CHLOROFORMUM.

Wäser, B., comments on the electro chemical production of chloroform and describes and illustrates the experimental apparatus used.—Chem. Ztg. 1910, v. 34, pp. 141–142.

Woolsey, J. F., reports that manufacturers usually supply the U. S. P. grade of chloroform and one for anæsthesia. A question which has been before us a long time is, "Does the U. S. P. mean to supply a product for anæsthesia? If so, then why do manufacturers supply two kinds?"—Proc. Pennsylvania Pharm. Ass., 1910, p. 136.

Gane and Webster assert that chloroform that strictly answers the official requirements is sufficiently pure for anæsthetic purposes, so that there seems hardly need for a new monograph for "chloroformum ad narcosin." It has been stated that the chloroform which is now so largely obtained from acetone is not as efficient as that made from alcohol, owing to the fact that the latter contains a small percentage of ethyl chloride.—Drug Topics, 1910, v. 25, p. 69.

Dohme and Engelhardt state that the Ph. Hung. III gives the specific gravity of chloroform for anæsthesia as 1.485 to 1.489, the boiling point from 60° to 62°; 10 cc. of the preparation when allowed to evaporate spontaneously in a porcelain dish should not leave a residue nor a foreign odor.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1176.

The Budapest Correspondent (Lancet, 1910, v. 178, p. 961) notes that chloroform *ad usum externum* has been added to the Ph. Hung. III. As the anæsthetic chloroform is expensive a cheaper preparation for external use had to be introduced.

The monograph for chloroform, to be included in the Ph. Germ. V, requires that this article contain from 99 to 99.4 per cent of pure chloroform, and permits the presence of from 0.6 to 1 per cent of absolute alcohol. In connection with chloroform for anæsthesia it is required that when shaken with sulphuric acid the latter should not be discolored at the end of 48 hours. It must also be free from organic contaminations, and is to be kept in amber, tightly stoppered bottles.—Pharm. Zentralh. 1910, v. 51, pp. 190–191. Also J. Pharm. Elsass-Lothringen, 1910, v. 37, p. 57.

Linke and others discuss the proposed Ph. Germ. V standards for chloroform for anæsthesia and suggest several modifications in the tests and method of applying them.—Apoth. Ztg., 1910, v. 25, pp. 189–190, 247–248, 285–287 and 426.

Arends, G., discusses the requirements that should be made for a chloroform to be used for anæsthesia.—Pharm. Ztg. 1910, v. 55, p. 355.

Stadlmayr, in a review of the requirements and tests for chloroform for anæsthesia, presents some historical data and also calls attention to the regulations that have been made from time to time regarding the purity of chloroform and the preservation by the addition of alcohol. He concludes that chloroform for anæsthesia requires consistent and careful handling and supervision from time to time of its manufacture to the time of its use.—Pharm. Post, 1910, v. 43, pp. 418–420.

Brown, Linwood A., states that when chloroform is to be used for anæsthetic purposes, it should be perfectly free from chlorinated and other decomposition products, as such impurities increase its toxicity. Light rapidly decomposes chloroform.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 149.

Riedel's Berichte (1910, p. xxvii) discusses the determination of the boiling point of chloroform, and reports having met with samples of chloroform leaving a perceptible amount of a waxlike residue.

Elvove, Elias, outlines a general mode of procedure applicable to the assay of chloroform.—Am. J. Pharm. 1910, v. 82, pp. 403–409.

Raubenheimer, Otto, thinks that the U. S. P. chloroform liniment is superior to the preparation of the foreign pharmacopœias which are usually mixtures of chloroform and some fatty oil.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1229.

Sayre, L. E., reports on 1 sample of spirit of chloroform: illegal.—*Ibid.* p. 1095.

Robinson, Victor, presents a sketch of the life of Simpson and comments on the introduction of chloroform as an anæsthetic.—Critic Guide, New York, v. 13, pp. 89–96.

Chassevant employs a 1:15 solution of iodine in chloroform for disinfection of the skin. This he considers more satisfactory than the ordinary tincture because it is absolutely stable.—Lancet, 1910, v. 178, p. 874.

McMechan, F. H., describes and illustrates dropper ampoules, for the administration of chloroform.—*Ibid.* p. 37.

The Brit. M. J. (1910, v. 2, Supplement, pp. 47–72) gives the final report of the special chloroform committee.

Chalmers, M. D., presents the report of inquiry into the question of deaths resulting from the administration of anæsthetics.—Lancet, 1910, v. 178, p. 1087. See also editorial, p. 1078.

The Pharm. J. (1910, v. 30, 31) [84, 85], reports the death of 61 patients while under the influence of chloroform as an anæsthetic in Great Britain.

Xrayser II asserts that as long as accidents happen and fatalities occur during the administration of anæsthetics, and so long as persistent nausea follows the use of chloroform, there will be doubts as to the purity of the anæsthetic employed. He asks is it quite certain that the anæsthetic is to blame, and not, rather, the method of administration?—Chem. & Drug. 1910, v. 77, p. 147.

Thomas, J. A., deplores the fact that, in many hospitals and public institutions, methylated chloroform and ether are largely, if not entirely, used for anæsthetic purposes for economy's sake; therein lies the possible explanation of some of the deaths due to anæsthetics.—Pharm. J., 1910, v. 31 (85), p. 88.

Mollison, C. H., from a study of 36 necropsies after death under anæsthesia, describes six groups of cases in which he considers chloroform exceedingly dangerous.—Lancet, 1910, v. 179, p. 263.

Telford, E. D., presents some notes on delayed chloroform poisoning: since his last report (*Idem* 1908, v. 174, p. 623) he has used ether in almost every case of operation.—*Ibid.* p. 1270.

Goodhart, G. W., contributes a note on chloroform necrosis of the liver with a tabulated summary of his experimental results.—Brit. M. J., 1910, v. 2, pp. 1425–1427.

McCown and Fontaine report a case of acute yellow atrophy of the liver following 2 chloroform anæsthesias in quick succession in a pregnant woman.—J. Am. M. Ass., 1910, v. 55, p. 368.

Rowell, George, discussing the prevention and treatment of surgical shock during inhalation anæsthesia, states that chloroform was the worst and ether the best anæsthetic, from the point of view of shock.—Lancet, 1910, v. 179, p. 556.

Martin, J. J., discusses the use of chloroform in obstetrics, and asserts that he has never seen any harm come from its use, either to the mother or babe, and when such a pleasant remedy can be the means of relieving the anxious mind, terrible pain, nervousness and suffering beyond description, why not use it.—Electic M. J., 1910, v. LXX, p. 93.

McHenry, O. P., points out that chloroform may be given during confinement for pain when labors are protracted. It relaxes the parts, quiets the patient, lessens the suffering, all of which is beneficial; he questions very much if the convalescence of any woman was better than it would have been had no chloroform been given.—Eclectic M. J., 1910, v. LXX, p. 141.

Buxton, Dudley W., discusses the dosimetric method of administering chloroform.—Brit. M. J., 1910, v. 2, pp. 751–754. See also *Ibid.* p. 784 and Editorial, p. 797.

Tyrode, Maurice Vejux, discusses intravenous ether and chloroform narcosis. He quotes Nicloux as having shown that a certain portion of inhaled chloroform which is not recovered in the excretion is changed by a process of hydration with the ultimate formation of carbon monoxide.—Boston M. & S. J., 1910, v. 163, p. 19. See also an editorial, Therap. Gaz., 1910, v. 34, p. 324.

Cushny, Arthur R., concludes that the exhalation of volatile substances from the lungs is exactly analagous to their evaporation from solutions in water, and the pulmonary cells seem to be purely passive in the process. The less the solubility and the more distant the affinity, the larger the amount exhaled.—J. Physiol. Lond., 1910, v. 40, pp. 17–27.

Devaux, E., notes that in œdematous subjects the elimination of chloroform, after anæsthesia, is slow and for many days thereafter the urine still shows it.—Compt. rend. Soc. Biol. 1910, v. 69, p. 416.

Shaklee, A. O., finds that chloroform is far inferior to ether for the treatment of strychnine poisoning, and probably for the treatment of convulsions in general. Dogs saved from strychnine death by means of chloroform are likely to die later of chloroform poisoning.—Philippine J. Sc. 1910, v. 5, B, pp. 547–551.

Vernon, H. M., in a discussion on the mode of union of certain poisons with cardiac muscle, states that chloroform reduces the cardiac contractions to a constant level by an amount roughly proportional to the concentration.—J. Physiol. Lond. 1910, v. 41, pp. 194–232.

Nicloux, Maurice, presents a note on the decomposition of chloroform in the organism.—Compt. rend. Acad. sc. 1910, v. 150, pp. 1260–1263.

In a subsequent paper he discusses the mechanism of this decomposition.—*Ibid.* pp. 1777–1790. See also J. physiol. et path. gen. 1910, v. 12, pp. 657–672, 681–695, and Bull. Soc. chim. France, 1910, v. 7, pp. 561–567.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 142–144) reviews the literature of 1910 relating to chloroform.

A number of references on the pharmacology of chloroform, its use as an anæsthetic and the sequelæ following its use, will be found in the J. Am. M. Ass. and the Index Medicus.

CHONDRUS.

Knabenshue, Samuel S., presents a note on the gathering and preparation of Irish moss for the market.—Canad. Druggist, 1910, v. 22, p. 22.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 16) point out that the Ph. Germ. V restricts the ash content of carrageen to 16 per cent.

Hartwich, C., thinks that the iodine test for sulphurous acid in Irish moss should have been retained as this reagent also serves to indicate sodium thiosulphate, which is frequently present when this drug has been bleached with chlorine and subsequently washed with a solution of sodium thiosulphate.—Apoth. Ztg., 1910, v. 25, p. 1045.

LaWall and Bradshaw report finding 15.3 per cent ash in chondrus.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 37) report that 1 selected sample of Irish moss left 17 per cent of ash. One faked sample of ground moss offered at a cheap rate, left 35 per cent of ash, and contained a great deal of calcium sulphate; its gelatinizing value was about 60 per cent below normal.

CHROMII TRIOXIDUM.

The Committee of Reference in Pharmacy states that the Ph. Brit. process for chromic acid does not yield a product complying with the official requirements. The test with alcohol should be omitted, as it is incorrect and unnecessary. (Compare also "Report of the Committee in Pharmacy," 1908, p. 4.)—Brit. & Col. Drug., Lond., 1910, v. 58, p. 29.

Brown, Linwood A., points out that great care should be used in handling and storing chromium trioxide, as it is very deliquescent and when brought in contact with organic substances, decomposition takes place, often with great violence.—Bull. 150, Kentucky Agric. Exper. Sta., 1910, p. 138.

Southall Bros. & Barclay (Rep. 1910, Birmingham 1911, p. 28) have found samples of chromic acid described as "purified" to contain 83 to 84 per cent of chromium trioxide.

Montet, Maurice, discusses the use of chromic acid in aphthous fever.—J. Agric. trop. 1910, v. 10, p. 71.

CHRYSAROBINUM.

Gane and Webster assert that the official description of chrysarobin is not altogether adequate and should be extended to read, "A neutral principle obtained from Goa powder by extraction with hot chloroform, evaporating the percolate to dryness and powdering the residue." It should be noted that this substance is not identical with chrysophanic acid, though it is frequently sent out under this name as "medicinal chrysophanic acid." It is exceedingly irritating to the eyes, and this fact should be noted in the Pharmacopœia.—Drug Topics, 1910, v. 25, p. 69.

Hartwich, C., points out that the Ph. Germ. solubility requirement for chrysarobin has been decreased from 1:150 to 1:300.—Apoth. Ztg., 1910, v. 25, p. 1052.

Oesterle and Johann report observations on so-called methylchrysophanic acid and conclude that the methoxy containing body in commercial chrysophanic acid, from chrysarobin, is frangula-emodin-monomethylether and not methylchrysophanic acid.—Arch. d. Pharm., 1910, v. 248, pp. 476–491.

The same authors discuss the chemistry of chrysophanic acid and review some of the recent work on the constitution of this substance.—*Ibid.* pp. 492–500.

Mittelbach, Wm., reports that in the formula for chrysarobin ointment there seems to be a typographical error, 6 gm. chrysarobin being ordered instead of 5.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 793.

Koch, William J., asserts that in chrysarobin ointment, a base consisting of one part hydrous wool-fat, and three parts petrolatum will make a nice smooth, absorbent ointment.—Am. Druggist, 1910, v. 56, p. 239.

Unna, P. G., presents some new facts concerning chrysarobin.—Brit. M. J., 1910, v. 2, p. 1593.

An editorial (Chem. & Drug. 1910, v. 77, p. 833) calls attention to P. G. Unna's contribution of new facts concerning chrysarobin. He comes to the conclusion that the oxidation of chrysarobin upon the skin is due to the presence of oleic acid on the skin surface and the product formed is the remedial agent. He describes oxychrysarobin and chrysaloxin.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 145–148) states that a closer insight into the oxidation processes which chrysarobin undergoes on the skin is afforded by the interesting experimental results published by Unna and Golodetz. They found that chrysarobin when oxidized yields not only chrysophanic acid but two other substances, oxychrysarobin and crysaloxin.

CIMICIFUGA.

Oldberg, Oscar, states that the name cimicifuga is derived from the latin *cimex*, bug, and *fugare*, to drive away.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 757.

Gane and Webster assert that the ferric chloride test might be added to the description of cimicifuga, as an additional means of distinguishing the rhizome from black hellebore. A limit of ash, not to exceed 10 per cent, should also be given.—Drug Topics, 1910, v. 25, p. 69.

LaWall and Bradshaw report finding 9.65 per cent ash in cimicifuga.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Finnemore, Horace, reports on the chemical examination of the rhizome of cimicifuga. A systematic examination has resulted in the isolation and identification of isoferulic acid, also a minute quantity of an acid whose melting point was unaffected by admixture with salicylic acid. Palmitic, oleic, and other unsaturated acids, also a phytosterol, are also present, and distinct reactions for alkaloids have been found, but the amount present is very small.—Pharm. J., 1910, v. 31 (85), pp. 142–144, 178. See also Year-Book of Pharmacy, 1910, pp. 435–444.

Niederkorn, J. S., compares the efficiency of macrotys and caulophyllin and states that in his hands macrotys proved the better agent, all conditions considered.—Eclectic M. J., 1910, v. 70, pp. 63–66.

Adams, F. X., points out that macrotys or cimicifuga is one of the remedies in rheumatism with shifting pains, muscular soreness. It is good in dysmenorrhœa, but he never could rely on it alone. The indications by the tongue are a tongue normal in size and color with a white coating.—*Ibid.* p. 73.

Haines, O. S., discusses the use of cimicifuga racemosa and asserts that there is no medicine or drug more likely to cause a tremendous headache and any one who is ''from Missouri'' need only take the tincture awhile to find this out. The relationship of similarity is perfect to a great many ''menstrual headaches.''—Hahnemann. Month., 1910, v. 45, pp. 801–809.

Heeve, William L., asserts that macrotys in drop doses every two hours will relieve the pains of uterine fibroids better than any other remedy known to him.—Eclectic M. J., 1910, v. 70, p. 188.

Monroe, A. Leight., quotes Kinyon who states that cimicifuga is a uterine polycrest and is more frequently called for in dysmenorrhœa than almost any other remedy in the materia medica.—Hahnemann. Month., 1910, v. 45, p. 235.

CINCHONA.

Fichtenholz, A., quotes Tschirch as authority for the derivation of the word cinchona from the name of the Countess of Chinchon.—J. pharm. et chim. 1910, v. 2, p. ii.

An editorial (Brit. & Col. Drug., Lond., 1910, v. 57, pp. 21–22) calls attention to the annual review on quinine and cinchona bark published by C. F. Boehringer & Söhne and presents tables showing the imports into Great Britain, the exports from Java, the estimated quinine content of the bark sold at auction at Amsterdam, and the stocks of quinine in London at the close of the years from 1897 to 1909, inclusive.

Tunmann, O., estimates the production of cinchona bark as 10,000,000 kg. and the production of quinine at approximately 500,000 kg. Because of over production the plantations in British India have been largely discontinued and in Ceylon, which island exported 15,000,000 pounds in 1886, the exports have steadily decreased to 234,499 pounds in 1907. The export from Java, on the other hand, has increased from 4,218,000 kg. in 1897 to 8,606,000 in 1907. He also presents a table showing the production of bark in several South American countries.—Apoth. Ztg., 1910, v. 25, p. 565.

Gehe & Co. (Handels-Bericht 1910, p. 59) commenting on the extremely low price of cinchona bark, express the belief that the cultivation of this drug at the present price is not profitable and will no doubt result in materially reducing the areas under cultivation.

An abstract from the report of the Government cinchona plantations includes a table giving the quinine sulphate equivalent of a number of samples of cinchona bark.—Pharm. Weekblad, 1910, v. 47, pp. 1045–1047.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, pp. 17–25) point out that the Ph. Germ. V has increased the alkaloid content of cinchona from a minimum of 5 per cent to a minimum of 6.5 per cent of alkaloid, having the average molecular weight of 309. The microscopical appearance of the powdered drug is described at length. They criticize the assay methods prescribed and present a table showing the comparative results for the several official preparations according to the methods included in the Ph. Germ. IV, Ph. Germ. V and that proposed by Fromme, which latter method is given in detail.

Hartwich, C., discusses the Ph. Germ. Monograph for cinchona bark and commends the increase of alkaloid requirement to 6.5 per cent.—Apoth. Ztg., 1910, v. 25, p. 1052.

Gane and Webster assert that there no longer appears to be any necessity for more than one monograph on cinchona. Almost all the bark found today in commerce is from hybrid species and the demand for special varieties is getting smaller every year. The assay process for cinchona needs revision. It is complicated and uncertain in results, except in experienced hands, and in the case of barks rich in alkaloid invariably yields results below the truth.—Drug Topics, 1910, v. 25, p. 69.

Schaefer, George L., presents some observations on the solubility of alkaloids of cinchona bark and their salts in water at a temperature of 25°.—Am. J. Pharm., 1910, v. 82, pp. 175–178.

Cohn, Georg, discusses the chemistry of the cinchona alkaloids and some of their derivatives.—Pharm. Zentralh. 1910, v. 51, pp. 266–274.

LaWall and Bradshaw report finding 2.4 per cent ash in yellow cinchona.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Schneider, Albert, points out that the histology of the bark of several cinchona species found on the market is similar and that, when cinchona is adulterated with worthless cinchonas, the microscope is not conclusive.—Merck's Rep., 1910, v. 19, p. 62.

Herzog and Fosse report obtaining 19.42 per cent of extractive from cinchona, by percolation, while maceration with expression yielded 19.3 per cent.—Ber. d. pharm. Gessellsch., 1910, v. 30, p. 337.

Caesar & Loretz (Jahres-Ber., 1910, pp. 82–84) outline their method of testing cinchona and present a table showing the requirements for alkaloid and ash met with in the several pharmacopœias.

Lyons, A. B., reports a comparison of the requirements and methods of the assay for cinchona included in the various pharmacopœias.—Am. Druggist, N. Y., 1910, v. 56, p. 102.

Dohme and Engelhardt compare the U. S. P. assay method for cinchona with the methods given in thirteen of the foreign pharmacopœias.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 840–850.

Engelhardt and Jones discuss the assay of cinchona bark and conclude that the U. S. P. process gives somewhat lower results than the Fromme process, the probable reasons for which, they also discuss.—Am. Druggist, 1910, v. 56, p. 5.

Howard, Bernard F., is astonished at the assertion of Engelhardt and Jones as to the constancy of the relation of the percentages of the four principal alkaloids of cinchona. The immense variations are best illustrated by the fact that a considerable number of well known Dutch analysts in Amsterdam publish about once a month an official list of analyses, study of which shows not only great variation in the percentage of total alkaloids, but also great differences in the proportion of quinine present to cinchonidine, cinchonine, and quinidine.—Pharm. J. 1910, v. 30 (84), p. 504.

Lyons, A. B., asserts that in assays of cinchona bark, a preliminary treatment of the powder with hydrochloric acid on a steam bath seems to be a capital improvement, insuring complete extraction of the drug, and materially shortening the time of the assay.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 776.

Thome, E. R., thinks that normal hydrochloric acid should replace sulphuric acid for the acid extraction in the assay method for cinchona.—Practical Druggist, 1910, v. 28, p. 122.

Scoville, W. L., points out that in order to secure constant results in ether-soluble alkaloids, the aqueous solution from which the final extraction with ether is made, must be fairly uniform in volume. Hydrochloric acid extracts more rapidly than sulphuric, and 25 cc. of 2 per cent hydrochloric acid is usually sufficient.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 821.

Caesar & Loretz (Jahres-Ber., 1910, p. 13) express the belief that the Ph. Germ. assay method for cinchona gives uniformly low results with the better type of drug, asserting that a bark containing 8.6 per cent of total alkaloids will assay at least 2.5 per cent less.

Lyons, A. B., thinks that the Ph. Helv. IV assay method for cinchona embodies several improvements. He thinks that for practical purposes the U. S. P. plan for determining alkaloids gravimetrically is equally good.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 826–827.

An editorial (Chem. & Drug. 1910, v. 76, p. 49) calls attention to the lack of uniformity in results obtained by well-known bark analysts and the discussion thereof by van Riemsdijk (Indische Mercuur, Dec. 21, 1909). A parcel of 10,000 kilos analyzed by van Ketel gave 8.54 per cent quinine; a control analysis by Moens and van der Sleen, 9.84; the factory analysis, 8.09; while van Leersum, who was called in to arbitrate, found 8.1 per cent. For a second similar parcel the figures were, respectively: 9.50, 9.81 and 8.71—the last by both the factory and van Leersum.

Another editorial (*Ibid*. p. 147) notes that van Leersum has devised a cheap method for preparing quinine sulphate from the bark, which is completed in 24 hours and yields an alkaloid as pure as anything now marketed.

Hoover, G. W., points out that a series of the cooperative work done in connection with the assay of drugs shows a variation of 15 per cent of alkaloids in cinchona based on the amount present as 100 per cent.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 182. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Deniges (Bull. Soc. pharm. Bordeaux, Sept. 1909) outlines a method for the differentiation of the cinchona alkaloids by their fluoroscopic reaction.—Ann. chim. analyt. 1910, v. 15, p. 20.

Wiley, H. W., reports that of the 28 shipments of cinchona entered all samples taken were above the U. S. P. standard.—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 470.

Sayre, L. E., reports on 34 samples of cinchona bark; 23 passed—11 illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1096.

Vanderkleed, Chas. E., reports 43 assays of cinchona, lowest 3.942, highest 10.730 per cent total alkaloids; 40 above and 3 below standard.—Proc. Pennsylvania Pharm. Ass., 1910, p. 147. See also *Ibid.* p. 136.

Engelhardt, Hermann, reports that of 39 samples examined, 7 had to be rejected, 2 of them assaying as low as 2.9 per cent and 3.76 per cent of total alkaloids.—Proc. Pharm. Ass., 1910, v. 58, p. 1257.

Rusby, H. H., states that he has met with cinchona bark of a species which contains no quinine and little more than a trace of any alkaloid.—Practical Druggist, 1910, v. 27, p. 424.

Scoville, W. L., reports that only two of the cinchona preparations examined by him showed any marked deterioration.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 880, 883.

Dohme and Engelhardt outline the Ph. Hung. III method for making extract and fluid extract of cinchona.—*Ibid.* p. 1179.

Beringer, G. M., thinks to insure the extraction of the drug in making fluid extract of cinchona a small quantity of hydrochloric acid should be added to the menstruum.—*Ibid.* p. 781.

Knight, Henry G., reports the examination of 1 sample of fluidextract of cinchona: not passed.—Rep. Dairy, Food & Oil Com., Wyoming, 1910, p. 57.

Osborne, Oliver T., thinks there is no need of fluid extract of cinchona in the Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 209.

Dohme and Engelhardt state that the Ph. Hung. III directs that the tincture of cinchona should contain 5.5 per cent of extractive matter. No assay process is given.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1192.

Frerichs, H., discusses methods for making and assaying tinctures of cinchona.—Apoth. Ztg., 1910, v. 25, pp. 836–837.

Hommell, Philemon E., states that both the tincture of cinchona and the compound tincture of cinchona throw down a brownish deposit on standing. The solvent action of more glycerin is needed in order to render them entirely satisfactory to a large class of prescribers.—Merck's Rep., 1910, v. 19, p. 122.

Gaze, R., discusses the assaying of tinctures of cinchona and of compound tincture of cinchona.—Apoth. Ztg., 1910, v. 25, p. 669.

Dunn, John A., presents a formula and directions for making detannated tincture of cinchona.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1119.

Osborne, Oliver T., considers the compound tincture of cinchona in teaspoonful doses taken with a little water before meals one of the best stomachics, of which class he thinks there are altogether too many in the Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 208.

CINCHONA RUBRA.

Dohme and Engelhardt state that in the Ph. Hung. III only the red bark is official. The amount of total alkaloids should be at least 6 per cent, and the method for determining this is the same as recommended by Fromme and Keller, the alkaloids being titrated.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1174.

LaWall and Bradshaw report finding 6.5 per cent ash in red cinchona.—*Ibid.* p. 752.

Engelhardt, Hermann, reports that 17 samples of red cinchona were examined of which 2 were rejected, not coming up to the alkaloidal strength.—*Ibid.*, p. 1257.

CINCHONIDINÆ SULPHAS.

Schaefer, George L., presents some observations on the solubility of cinchonidine and its salts in water at a temperature of 25°.—Am. J. Pharm. 1910, v. 82, pp. 175–178.

Sayre, L. E., reports on 2 samples of cinchonidine sulphate (pills): 1 passed; 1 illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1096.

Osborne, Oliver T., thinks that cinchonidine is not needed since quinine has become so cheap. It is doubtful that when there is idiosyncrasy against quinine there is no idiosyncrasy against cinchonidine.—J. Am. Ass., 1910, v. 54, p. 209.

CINCHONINÆ SULPHAS.

Rosenthaler and Görner in discussing the use of aromatic nitro compounds as precipitants for alkaloids point out that none of the compounds were found to be appreciably more sensitive than picric acid.—Ztschr. anal. Chem., 1910, v. 49, p. 345.

Schaefer, George L., presents some observations on the solubility of cinchonine and its salts in water at a temperature of 25°.—Am. J. Pharm. 1910, v. 82, pp. 175–178.

Rosengarten, George D., asserts that it is stated that one part of cinchonine sulphate is soluble in 69 parts of chloroform at 25°, and further on there is a requirement that: "If one part of the powdered salt be macerated with frequent agitation in 80 parts of chloroform, at ordinary temperatures, it should be wholly or almost wholly dissolved (limit of quinine or cinchonidine sulphate)."—*Ibid.* p. 30.

Gane and Webster assert that cinchonine sulphate is so inferior to quinine and cinchonidine and so little in demand that there does not appear to be any necessity for its retention. Its principal use nowadays is for the preparation of "tasteless syrup of quinine."—Drug Topics, 1910, v. 25, p. 69.

Osborne, Oliver T., things there is no need for cinchonine sulphate in the Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 209.

CINNALDEHYDUM.

Gane and Webster point out that cinnamic aldehyde is yellow in color. The gravity given in the U. S. P. is also rather low, commercial samples running from 1.047 up to 1.050 at 25°.—*Drug Topics, 1910, v. 25, p. 69.*

Mittelbach, Wm., thinks that cinnaldehyde is rarely used and might well be dropped.—Proc. Missouri Pharm. Ass., 1910, p. 98.

CINNAMOMUM SAIGONICUM.

Schneider, Albert, states that the skilled microscopist can distinguish between Cassia, Saigon and Ceylon cinnamon. The adulterants are readily detected.—Merck's Rep., 1910, v. 19, p. 63.

Rusby, H. H., states that he has met with Saigon cinnamon consisting of the bark of the guava tree, the ends of the quills having been dipped in a solution of cinnamon to give them a slight flavor.—Practical Druggist, 1910, v. 27, p. 424.

Osborne, Oliver T., thinks it should be decided in the next Pharmacopœia which cinnamon is best, and that alone should be made official. It seems unnecessary to have both a tincture and a spirit of cinnamon; the spirit is sufficient.—J. Am. M. Ass., 1910, v. 54. p. 291.

Gane and Webster assert that two varieties of cinnamon are not needed. The Ceylon, while less strongly aromatic, is of finer odor and taste than the Saigon variety and should alone be used in galenical preparations. The ash limit of not over 4 per cent for the Ceylon variety is rather too stringent. Five per cent would more nearly represent the ash content of commercial barks, and a higher ash than this has been reported.—Drug Topics, 1910, v. 25, p. 69.

Tunmann, O., discusses the production of Saigon cinnamon and presents a table showing the amount of this drug handled at the port of Hamburg 1897 to 1908.—Apoth. Ztg., 1910, v. 25, pp. 565–566.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 31) call attention to the botanical and economic study of the cinnamon trees of Indo-China, by Perrot and Eberhardt. See also Apoth. Ztg., 1910, v. 25, p. 5.

Beythien and Hepp report some observations on the composition of Seychelle cinnamon.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 19, pp. 367–368.

Thomann comments on the article by Rosenthaler and Reis on Seychelle cinnamon, and presents liberal abstracts.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 197–198.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 35–36) express the belief that the cinnamon trees in the Seychelles were originally introduced from Ceylon, and that recent investigations by

Rosenthaler and Reis have demonstrated the fact that anatomically the structure of the branch bark agrees entirely with that of Ceylon cinnamon.

Rairden, B. S., reports the export of 4,775 pounds of cinnamon from the Netherlands to the United States during the three months ended March 31, 1910.—Cons. & Tr. Rep. July 22, 1910, p. 209.

LaWall and Bradshaw report finding from 2.4 to 4.8 per cent ash in Saigon cinnamon.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

The Pharmaceutical Era says that Saigon cassia is adulterated with what resembles Winter's Bark.—*Ibid.* p. 743.

Havenhill, L. D., outlines a modified formula for tincture of cinnamon.—*Ibid.* p. 787.

CINNAMOMUM ZEYLANICUM.

Tunmann, O., discusses the origin of Ceylon cinnamon, calls attention to the marked reduction of the amount of this drug handled in London, and presents a table showing the decrease of the amount of this drug handled at the port of Hamburg from 1897 to 1908.—Apoth. Ztg., 1910, v. 25, p. 566.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 34) state that in Ceylon, as elsewhere in the tropics, the high prices obtainable for rubber have turned the attention of the planters to that article, and from elsewhere the news comes that it is intended at an early date to extend the rubber plantations considerably, at the expense of cinnamon cultivation. In view of the continually increasing consumption of cinnamon, an upward movement in the prices of the Ceylon article seems therefore inevitable.

Magelssen, William C., reports that a statement of the Ceylon Chamber of Commerce shows 1,248,190 pounds of cinnamon exported to the United States in 1909.—Cons. & Tr. Rep. Feb. 28, 1910, p. 4. See also *Ibid.* Sept. 12, 1910, p. 773.

A review of the Ph. Germ. V points out that under cortex cinnamoni and oleum cinnamoni, Ceylon cinnamon is given as the same.—Pharm. Ztg. 1910, v. 55, p. 1004.

Hartwich, C., points out that the Ph. Germ. V requires that cinnamon be restricted to the Ceylon variety which he believes to be desirable.—Apoth. Ztg., 1910, v. 25, p. 1052.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 25) point out that the Ph. Germ. now includes the dried bark of *Cinnamomum zeylanicum* in the place of the former official *Cinnamomum cassia*. The ash content should not exceed 5 per cent.

Rusby, H. H., states that he has met with Ceylon cinnamon from which the oil had been distilled.—Practical Druggist, 1910, v. 27, p. 424.

LaWall and Bradshaw report finding 3.4 per cent ash in Ceylon cinnamon.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

COCA.

Lloyd, John Uri, reviews the history and discusses the use of coca, the devine plant of the Incas.—Practical Druggist, 1910, v. 28, pp. 90–93. See also Editorial, p. 87.

An editorial (Chem. & Drug. 1910, v. 77, p. 18) calls attention to an article by de Jong in "Teysmannia" (1910, p. 201) on recent developments in the production of Java coca.

Geare, R. I., discusses the origin and use of coca, and presents an illustration showing the vegetative organs of the plant.—Nat. Druggist, 1910, v. 40, pp. 223–224.

Schneider, Albert, points out that the Bolivian, Peruvian (Truxillo) and Brazilian cocas are closely similar histologically.—Merck's Rep. 1910, v. 19, p. 63.

Gane and Webster report that the suggestion has been made that the official coca be restricted to the Bolivian variety, known in the trade as Huanuco, owing to the fact that it contains less isatropylcocaine than the Truxillo or Peruvian leaf. Coca leaves deteriorate with more or less rapidity, according to storage conditions, and directions should be included to store the leaves in a dry place to avoid loss of alkaloid by hydrolysis.—Drug Topics, 1910, v. 25, p. 100.

Lyons, A. B., thinks that coca is of little importance in pharmacy as the alkaloid, in the form of the hydrochloride, is always available and is perfectly definite in its composition and action. He also reviews the U. S. P. assay method for coca.—Am. Druggist, 1910, v. 56, p. 6.

Tunmann and Jenzer report a pharmacognostic study of *Erythroxylon coca,* Lam. with special consideration of the alkaloid content of the leaf.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 17–24. See also Arch. d. Pharm., 1910, v. 248, pp. 514–519.

Holmes, E. M., contributes a note on coca leaves with special reference to *E. truxillense,* Rusby.—Pharm. J., 1910, v. 31 (85), p. 736.

An unsigned article discusses the production and use of coca leaves, also presents a table showing the exports of crude cocaine from Peru, and a second table showing the export of coca leaves from Ceylon, and presents some statistics showing the imports of coca leaves to the United States from 1904 to 1908 inclusive.—Bull. Imp. Inst. 1910, v. 8, pp. 388–392.

Tunmann, O., asserts that South America still supplies the major part of the coca of commerce although most of the drug comes from cultivated plants. He also comments on the production of crude cocaine and presents a table showing the amount imported into Hamburg.—Apoth. Ztg., 1910, v. 25, pp. 705–706.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5, [1910], 1911, p. 33) point out that the Ph. Germ. V requires that coca leaves be renewed annually. No assay is required.

LaWall and Bradshaw report finding 10.6 per cent ash in coca.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Wiley, H. W., reports that coca continues to be of excellent quality.—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 470.

Cohn, Georg, discusses the chemistry of the alkaloids of coca and some of their derivatives.—Pharm. Zentralh. 1910, v. 51, pp. 364–368.

Lyons, A. B., reports a comparison of the requirements and methods of assay for coca as included in the Ph. Helv. and the U. S. P.—Am. Druggist, N. Y., 1910, v. 56, p. 102.

Bierling, Pape and Viehöver present a comparative and critical study of the several assay methods for coca. They comment on a total of 21 methods, including the one given by the U. S. P., and present a table showing a comparison of the results obtained by three investigators using several methods.—Arch. d. Pharm., 1910, v. 248, pp. 303–336.

Caesar & Loretz (Jahres-Ber., 1910, pp. 95–96) outline the Keller-de Jong method of assay for coca and call attention to the fact that, of the 11 pharmacopœias mentioned, only 2 require an assay for this drug, the Ph. Helv. IV requiring 0.7 per cent and the U. S. P. VIII 0.5 per cent of alkaloid.

Kebler, Lyman F., in a review of the present status of drug assays, points out that in the case of coca the variation is as high as 35 per cent, a range which is entirely too great.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 858.

Hoover, G. W., points out that a review of the cooperative work done in connection with the assay of coca shows a variation by two methods used of approximately 25 per cent of alkaloids based on the amount present as 100 per cent.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 182. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Rippetoe, John R., asserts that very few samples of coca assay less than 0.8 per cent of ether-soluble alkaloids, therefore, it might be advisable to raise the standard from 0.5 per cent to 0.8 per cent. He has had samples of Truxillo leaves assaying as high as 1.2 per cent of the ether-soluble alkaloids. The assay process is somewhat simplified by using 5 grammes of the drug instead of 10, as the exhaustion of the drug with the ether chloroform mixture is much more easily accomplished.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1060.

Engelhardt, Hermann, reports that the samples and shipments of coca leaves fully came up to the required strength—viz., .5 per cent of ether soluble alkaloids. He received a few large shipments which contained more than 1.25 per cent of ether-soluble alkaloids.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1257.

Vanderkleed, Chas. E., reports 4 assays of coca leaf; lowest, 0.700, highest, 0.889 per cent alkaloids; all above standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Goeckel, Henry J., reports the results of 60 coca assays made according to a method which he outlines; the maximum was 1.11; minimum, 0.582; average, 0.780 per cent alkaloids.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1051–1053.

Sayre, L. E., reports on 16 samples of coca: 12 passed; 4 illegal.—*Ibid.* p. 1096.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 8) report assays of 4 parcels of coca, all Peruvian leaves, the yield of total alkaloid being from 0.50 to 0.94 per cent.

Thome, E. R., states that the standard for coca is too low to obtain a fluid extract of 0.5 per cent. He has prepared fluid extracts and assayed them from time to time showing that deterioration takes place a short while after making. A higher percentage of alcohol will prevent deterioration of alkaloids to some extent.—Practical Druggist, 1910, v. 28, p. 122.

Scoville, W. L., asserts that coca preparations are unreliable at best, and should be dropped; but, if coca or preparations of coca are to be assayed, the first extraction should be with petroleum ether to eliminate the hydrolyzed alkaloids.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 821. See also *Ibid.* p. 883.

Dohme and Engelhardt report that fluid extract of coca loses as much as 20 per cent of cocaine strength and the former results have shown that during the period of more than a year, the amount of cocaine is reduced to about one-half, calculating the acid used for neutralizing the basic substance obtained as cocaine. This calculation, however, is only correct when a total destruction of the cocaine molecule takes place and not a partial one, with the formation of ecgonine or other bases.—*Ibid.* p. 873.

An editorial (Am. Druggist, 1910, v. 56, p. 4), in discussing the stability of galenical preparations, points out the desirability of adding a time limit label to fluid extracts of coca, as it has been definitely established that this preparation deteriorates on standing.

COCAINA.

Tunmann, O., presents a table showing the amount of crude cocaine imported into Hamburg during the years 1899 to 1910.—Apoth. Ztg., 1910, v. 25, p. 706.

Menge, George A., in a study of melting point determinations reports 6 samples of cocaine which were found to melt at from 97.5° to 100°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, p. 89. See also Proc. Am. Pharm. Ass., 1910, v. 58, p. 1042.

Fuller, H. C., presents a note on the volatility of cocaine, and points out that this substance is volatile at 100°, and residues containing it should therefore be dried cautiously at not over 90° and for safety should be brought to a constant weight by drying over sulphuric acid.—J. Ind. & Eng. Chem., 1910, v. 2, p. 426.

Cohn, Georg, discusses the chemistry of cocaine and some of its derivatives.—Pharm. Zentralh. 1910, v. 51, p. 364.

Elvove, Elias, in a report of further studies in the application of the Volhard method to the estimation of alkaloids, calls attention to the possibilities of applying this method for the determination of cocaine.—J. Am. Chem. Soc., 1910, v. 32, p. 136.

Nyman and Bjorksten (Farm. Notisbl. 1910, p. 179–183; from Pharm. Ztg. 1910, p. 724) present a method for the estimation of cocaine in solutions, employing platinum chloride in hydrochloric acid with the addition of alcohol.—J. pharm. et chim. 1910, v. 2, p. 414.

Rosenthaler and Görner in discussing the use of aromatic nitro-derivatives as precipitants for alkaloids state that trinitroresorcin yields characteristic crystals with cocaine.—Ztschr. anal. Chem. 1910, v. 49, p. 347.

Fuller, H. C., discusses the determination of cocaine and strychnine and atropine and strychnine when they occur together.—J. Ind. & Eng. Chem., 1910, v. 2, pp. 378–379.

See also article on the determination of cocaine in medicated soft drinks.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 191. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

An editorial (Pharm. J. 1910, v. 31 (85), p. 462) states that as compared with former years the demand for cocaine has decreased enormously, but this can readily be explained by the prohibition enforced by the Indian and other governments. It is also possible that while the legitimate use of cocaine in Europe may have decreased, there is still a demand, and perhaps even an active and increasing demand, in some parts of the world, for cocaine for purposes which can not be regarded as legitimate.

Koch, Christopher, asserts that 150,000 ounces of cocaine are produced annually in this country of which 130,000 ounces are used to make demons out of human beings.—Proc. Pennsylvania Pharm. Ass., 1910, p. 198.

Kebler, L. F., believes that more than 90 per cent of the morphine and cocaine sold in this country is used for illegitimate purposes.—Proc. N. W. D. A., 1910, p. 29.

Schieffelin, Wm. Jay, in commenting on the widespread use of habit forming drugs states that while there is admittedly a tremendous abuse of cocaine in this country the responsibility for this can not be laid at the doors of the members of the Proprietary Association.—*Ibid.* p. 350.

A news note (Oil, Paint and Drug Reporter, 1910, v. 77, April 4, p. 9) reports a raid on cocaine and morphine dealers in Philadelphia.

See also *Ibid.*, April 11, p. 9.

An editorial (Meyer Bros. Drug., 1910, v. 31, p. 162) calls attention to the efforts made in Philadelphia to control the sale of cocaine.

Remington, Jos. P., discusses the illicit selling of cocaine and other habit producing drugs and calls attention to the need for extended efforts to restrict the sale and use of these articles.—Proc. Texas Pharm. Ass., 1910, pp. 90–92.

An editorial (N. A. R. D., Notes, 1910, v. 10, p. 15) comments on the sale of habit-forming drugs.

See also *Ibid.* p. 32 ff.

An editorial (Practical Druggist, 1910, v. 28, pp. 113–114) discusses the sale of morphine and cocaine by druggists, and comments on a recent ruling of the New York City Board of Health, restricting the sale of these articles.

LaWall, Charles H., asserts that there should be a process of assay under oleatum cocainæ, together with satisfactory tests for the identification of the separated alkaloid.—Am. J. Pharm. 1910, v. 82, p. 24.

Einhorn, Alfred, comments on the chemistry of cocaine and novocaine and the local anæsthetic properties of aromatic esters.—Ann. d. Chem., 1910, v. 371, pp. 125–131.

Yawger, N. S., contributes a paper on cocaine intoxication.—N. York M. J. 1910, v. 92, p. 1131.

The China Correspondent (Lancet, 1910, v. 179, p. 1317) notes the increasing numbers in which former opium habitués are seeking consolation from cocaine.

Crothers, T. D., presents a communication on cocainism, and urges medical men to dispense cocaine, personally when necessary to use it and keep the patient from the knowledge of its use.—Med. Rec. N. Y., 1910, v. 77, p. 744.

The Editor of the Therapeutics Column (J. Am. M. Ass., 1910, v. 54, p. 794) discusses the drug treatment of cocaine habitués, with special reference to the method published by Alexander Lambert.

Brady, William, states that cocaine, systemically, requires to be repeated every 2 hours to maintain its effect. So used in exhausted persons who are taking insufficient nourishment, it is an excellent temporary stimulant with which to tide over a serious crisis.—N. York M. J., 1910, v. 91, p. 210.

Engstad, J. E., reports successful results from the use of ether as an antidote in cases of cocaine and stovaine poisoning.—J. Am. M. Ass., v. 54, p. 964.

Piquand and Dreyfus present an experimental and clinical study of some local anæsthetics, suggested as substitutes for cocaine, as to (1) their anæsthetic power, (2) their toxicity, (3) their action on the tissues.—J. physiol. et path. gen. 1910, v. 12, pp. 70–85.

Gros, Oscar, reports a comparative study of the action of local anæsthetics and concludes that as a class local anæsthetics are protoplasmic poisons.—Arch. exper. Path. u. Pharmakol., 1910, v. 62, pp. 380–408.

For additional references on the pharmacology, toxicology and uses of cocaine and related compounds see J. Am. M. Ass., and Index Medicus.

COCAINÆ HYDROCHLORIDUM.

Oldberg, Oscar, thinks that instead of burdening writers of prescriptions with such a long title as "cocainæ hydrochloridum" it seems to him that cocainæ chloridum is much to be preferred because it is shorter.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 760.

Menge, George A., in a study of melting point determinations reports that the 8 samples of cocaine-hydrochloride examined by him were found to decompose at the melting point, and therefore were not standardized. He details the results of his experiments and points out that the U. S. P. states that this compound melts at about 189.9°. Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 89–90.

Gane and Webster point out that the melting point of cocaine hydrochloride is officially given as 189.9°. Few samples will melt at this figure, and it is a question if this is not too high. The Ph. Germ. gives 183°, and the Ph. Brit. from 180° to 186°. Accurate determinations with a highly purified salt are needed as well as specification of definite conditions under which the melting point should be taken. Directions to store the salt in a dry, dark place should be added, as cocaine salts undergo decomposition unless carefully preserved.—Drug Topics, 1910, v. 25, p. 100.

Eldred, Frank R., thinks that the melting point of cocaine hydrochloride is of no value unless the sample is heated rapidly at a definite rate. A sample heated rapidly to 175°, and then at the rate of 6° per minute, melted at 191°; the same sample heated rapidly to 170°, and then at the rate of 2° per minute, melted at 189°; when heated slowly it melted at 180°.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 892.

Rippetoe, John R., thinks that the melting point requirement for cocaine hydrochloride should be deleted from the U. S. P., as there is practically no true melting point; it is, more properly speaking, a decomposition point, which depends entirely upon the rapidity of heating the sample.—*Ibid.* pp. 1060–1061.

Dohme and Engelhardt outline the Ph. Hung. III test for cinnamylcocaine.—*Ibid.* p. 1176.

Schröder, M. J., comments on the preparation and use of isotonic and sterile solutions of cocaine hydrochloride. He concludes that solutions of cocaine hydrochloride can be sterilized at 100°, for one hour and that such solutions are quite stable.—Pharm. Weekblad, 1910, v. 47, pp. 600–612.

Rossi, Dante, makes a contribution to the study of solutions of cocaine for hypodermic use. He finds that cocaine does not undergo any appreciable decomposition at 70°, even when the action is prolonged for a long time; that decomposition begins at 100° and increases with temperature and duration.—Boll. chim. farm. 1910, v. 49, pp. 165–169.

Xyraser II states that the decomposition of cocaine by hydrolysis is not prevented by sterilization, and, in point of fact, it is found to be hastened by such sterilization as is recommended in the Italian Pharmacopœia. It is well known that cocaine solutions decompose in time, even in the cold; and if a solution of cocaine is kept in a boiling water bath for fifteen or twenty minutes, hydrolysis is certain to take place much more quickly.—Chem. & Drug. 1910, v. 77, p. 377.

Lemaire, Paul, discusses the differential characters of cocaine hydrochloride and of many of its substitutes.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 524–543.

COCCUS.

Gehe & Co. (Handels-Bericht 1910, p. 135) report a marked decrease in the use of cochineal and the accompanying decrease in the production and cultivation of this drug.

Engelhardt, Hermann, reports that as several reliable methods of determining the coloring power of cochineal are available, it cannot be too strongly recommended that the new Pharmacopœia adopt a standard for cochineal in order to exclude the inferior products met with on the market.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1258.

Caesar & Loretz (Jahres-Ber., 1910, pp. 81–82) outline their methods of testing coccus, and call attention to the lack of requirements in the several pharmacopœias, practically the only requirement being a limitation of the ash content to 6 per cent in 4 of the 11 pharmacopœias mentioned.

Gane, E. H., reports 2 samples of cochineal: 5 per cent ash and 8.2 per cent ash.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 743.

LaWall and Bradshaw report finding 3.28 per cent ash in cochineal.—*Ibid.* p. 752.

Patch, E. L., reports 1 sample of cochineal silver, 22 per cent ash; 1 black, 6 per cent ash.—*Ibid.* p. 743.

Eldred, Frank R., reports that the yield of ash from five lots of black grain was from 5.0 to 8.2 per cent; from four lots of silver grain, 23.3 to 25.5 per cent.—*Ibid.* p. 892.

Southall Bros. & Barclay (Rep. 1910, Birmingham 1911, p. 8) report that 3 samples of "silver grain" cochineal have been examined, the amount of mineral matter in one instance being in excess of the official maximum. The ash ranged from 5.65 to 8.74 per cent; water soluble matter, from 32.80 to 39.20.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 24) report that, out of 14 samples of cochineal examined during the year, 12 left an ash of 3.3 to 5.7 per cent. Two, however, exceeded the Ph. Brit. limit of 6 per cent, leaving 8 and 8.4 per cent respectively.

Davis, James E., reports that it is hard to find cochineal with 6 per cent ash, the U. S. P. requirement.—Proc. Michigan Pharm. Ass., 1910, p. 62.

CODEINA.

The Committee of Reference in Pharmacy presents a modified monograph for codeine. It should be soluble in about 80 parts of water, 1.6 of alcohol (90 per cent), 50 of ether and 1 of chloroform. (Compare Report, 1908, p. 23.)—Brit. & Col. Drug., Lond., 1910, v. 58, p. 29.

Dohme and Engelhardt state that the hydrochloride is the only one of the codeine salts official in the Ph. Hung. III. They outline the test for purity.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1176.

Schafer, George L., asserts that the solubility of codeine in ether is not 1:12.5 but 1:25.—Am. J. Pharm., 1910, v. 82, p. 220.

Eldred, Frank R., reports that 15 lots of crystallized codeine had melting points from 152° to 154°. One lot, heated to expel the water of crystallization, melted at 155°.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 892.

Cohn, Georg, discusses the chemistry of some of the derivatives of codeine.—Pharm. Zentralh., 1910, v. 51, p. 335.

Rosenthaler and Görner report observations on the use of aromatic nitroderivatives as precipitants for alkaloids. Many of these compounds yield heavy precipitates, tetranitrophenolphthalein and hexanitrodiphenlyamine were found to be more sensitive than picric acid.—Ztschr. Anal. Chem., 1910, v. 49, p. 347.

Elvove, Elias, in a report of further studies in the application of the Volhard method to the estimation of alkaloids, calls attention to the possibilities of applying this method for the determination of codeine.—J. Am. Chem. Soc., 1910, v. 32, p. 137.

Freund and Speyer report observations on the action of hydrogen dioxide on codeine.—Ber. deutsch. Chem. Gesellsch., 1910, v. 43, p. 3313.

Hall, J. O., recommends the use of codeine and aspirin as a sedative for patients who are unable to sleep.—Dental Cosmos, 1910, v. 52, p. 1085.

Zeelen, Victoire, in a report of observations on the action of combined opium alkaloids discusses the influence of codeine on the action of morphine.—Ztschr. exper. Path. u. Therap., 1910, v. 8, p. 592.

CODEINÆ PHOSPHAS.

Riedel's Berichte (1910, p. xxviii) points out that codeine phosphate is invariably colored rose red with sulphuric acid and that this solution after a short time turns yellow.

Schaefer, George L., asserts that preparations of codeine phosphate on the market contain only 0.5 molecule of water of crystallization. The salt with 2 molecules of water of crystallization exists, but it is a practical impossibility to produce it for commercial purposes. The salt with 0.5 molecule of water ought to be made official, being the pure commercial standard.—Am. J. Pharm., 1910, v. 82, p. 220.

Goeckel, Henry J., reports that 4 samples of codeine phosphate gave respectively: 70.399, 72.43, 75.41, and 89.04 per cent of alkaloid base.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1048.

COLCHICI CORMUS.

Fichtenholz, A., quotes Tschirch as authority for the statement that the word colchicum is derived from the legendary country of medicinal plants, *Colchis*.—J. pharm. et chim., 1910, v. 2, p. ii.

Butler, George F., asserts that Schroff has demonstrated that the root and seeds of colchicum which are gathered when the plant is in full bloom contain the largest portion of colchicine, and are the most active.—N. York M. J., 1910, v. 92, p. 953.

Schneider, Albert, calls attention to the structural characteristics of colchicum corm, and states that concentrated hydrochloric acid produces a reddish-yellow coloration.—Merck's Rep., 1910, v. 19, p. 63.

LaWall and Bradshaw report finding 2 and 2.5 per cent ash in colchicum corm.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Wiley, H. W., reports that colchicum continues to be of excellent quality.—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 470.

Clark, Albert H., reports that one sample of colchicum corm has been found below the standard.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 124.

Engelhardt, Hermann, reports that only 2 samples out of 13 did not come up to the official strength.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1257.

Sayre, L. E., reports on 18 samples of colchicum root: 15 passed; 3 illegal.—*Ibid.*, p. 1096.

Lyons, A. B., points out that the colchicine obtained in the present assay is never quite pure, and in the attempt to remove impurities one is liable to lose alkaloid. A method of determining the alkaloid by titration is a desideratum. The old method by Mayer's reagent gave good practical results, although chemists denounced it as empirical. Recently this titration has been placed on a scientific basis by Gunner Heikel, and his method certainly deserves the consideration of the new committee.—*Ibid.*, p. 777.

Scoville, W. L., points out that colchicine, which is soluble in water, is easily changed to colchiceine, which is almost insoluble in water, by heating the aqueous solution. This is the first difficulty in the assay, and if a high percentage of alkaloid is present there is considerable danger that a portion of it will be hydrolyzed and filtered out. This is particularly likely to occur in the assay of colchicum extract, which is rich in alkaloids.

Hoover, G. W., points out that a review of the cooperative work done in connection with the assay of drugs shows a variation by the pharmacopœial method of nearly 25 per cent of alkaloid in colchicum corm, and by a second method less than 7.5 per cent based on the amount present as 100 per cent.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 182. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.

Vanderkleed, Chas. E., reports 8 assays of colchicum corm, lowest 0.284, highest 0.460 per cent colchicine; 7 above and 1 below standard.—Proc. Pennsylvania Pharm. Ass., 1910, p. 147.

Lesueur, M., concludes that if the alcoholature made by heat from colchicum corm is the preparation which contains the most colchicine; it should nevertheless be recognized that the tincture made from the dried bulbs in good condition has an alkaloidal content not perceptibly less.—J. pharm. et chim. 1910, v. 1, pp. 239–245, 285–289.

The Budapest Correspondent (Lancet 1910, v. 178, p. 961) notes that vinum colchici is omitted from the Ph. Hung. III because the Pharmacological Congress held in Brussels did not sanction the preparation of powerful drugs in the form of medicated wines.

Osborne, Oliver T., thinks that the number of preparations of colchicum should be reduced, either the root or the seed is superfluous. If the wine of the root is the best liquid preparation there is no need of the extract of the root, the tincture of the seeds, the wine of the seeds, or the fluid extract of the seeds.—J. Am. M. Ass., 1910, v. 54, p. 469.

Monroe, A. Leight, quotes Simmons who states that colchicum seems to paralyse and render powerless the parts affected and when we find with this condition œdematous swelling occurring in a leucophlegmatic constitution we may expect a cure by the administration of this drug.—Hahnemann. Month., 1910, v. 45, p. 72.

See also under Colchici Semen.

COLCHICI SEMEN.

Gane and Webster think that there is no necessity for retaining both colchicum corm and seed. The seed contains a higher percentage of colchicine and is not subject to so great a variation in strength as the corm. The assay process for colchicum is exceedingly tedious, but gives fairly accurate results.—Drug Topics, 1910, v. 25, p. 100.

Holmes, E. M., calls attention to the large amount of sugar in certain colchicum seeds, carrying, according to Umney, from 0.90 per cent in a museum specimen to 7.00 per cent in a commercial specimen. This variation does not necessarily indicate fraudulent addition of glucose, but it is important as showing a source of error if the strength of the tincture be judged from the amount of extractive yielded by it.—Pharm. J. 1910, v. 30, p. 51.

Schneider, Albert, points out that colchicum seed contains thick-walled porous endosperm cells with proteid granules and oil globules. No starch present.—Merck's Rep., 1910, v. 19, p. 63.

LaWall and Bradshaw report finding 2.5 and 3.5 per cent ash in colchicum seed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Dohme and Engelhardt state that the Ph. Hung. III gives no assay process for colchicum seed, it is only required that, when extracted with alcohol, 10 per cent of extractive matter should be obtained.—*Ibid.* p. 1176.

Farr and Wright present a critical note on several processes for the determination of the alkaloids in colchicum seeds.—Pharm. J., 1910, v. 31 (85), p. 578–580.

Caesar & Loretz (Jahres-Ber., 1910, pp. 112–114) outline the Keller-Panchaud method of assay for colchicum, and point out that the U. S. P. VIII requires an alkaloid content of 0.55 per cent.

Lyons, A. B., thinks that the U. S. P. assay process for colchicum leaves much to be desired. He reviews the several suggestions that have been made from time to time for improving the assay of this drug.—Am. Druggist, 1910, v. 56, pp. 6–7.

Dohme, Engelhardt and Schmidt discuss the assay of colchicum seed and corm and report that experiments show that the colchicine separated by the U. S. P. process varied from 35.3 to 48.4 per cent pure.—Drug. Circ., 1910, v. 54, p. 58.

Scoville, W. L., reports that for preparations of colchicum he has used the Gordin-Prescott method, which has been accepted by the drug laboratory of the United States Department of Agriculture as giving more accurate, as well as more uniform, results than the U. S. P. method. The results are lower than the U. S. P. assay, but there is less danger of weighing fatty matters as alkaloid. Even this method is not altogether satisfactory, and allowance should be made for impurities, as in any gravimetric process.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 881.

Lyons, A. B., points out that the method, adopted by the U. S. P. for purifying crude colchicine for gravimetric determinations, is far from satisfactory. The impurities on the one hand are not completely removed, while alkaloid is unquestionably lost. He suggests several modifications of the official method.—*Ibid.* p. 828.

He also reports the requirements and methods of assay for colchicum seed included in the U. S. P.—Am. Druggist, N. Y., 1910, v. 56, p. 102.

Hoover, G. W., points out that a review of the cooperative work done in connection with the assay of colchicum seed shows a variation by the pharmacopœial method of slightly less than 25 per cent of alkaloid, and by a second method over 50 per cent based on the amount present as 100 per cent.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 182. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.

Vanderkleed, Chas. E., reports 2 assays of colchicum seed, lowest 0.670, highest 0.756 per cent colchicine; both above standard.—Proc. Pennsylvania Pharm. Ass., 1910, p. 147.

Patch, E. L., reports 3 assays of colchicum seed varying from 0.52 to 0.56 per cent.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 743.

Engelhardt, Hermann, reports that 20 out of 26 samples of colchicum seed were inferior to the requirements of the U. S. P., some assaying as low as 0.24 to 0.22 per cent, etc. of colchicine.—*Ibid.* p. 1257.

Clark, Albert H., reports that 1 sample of colchicum seed has been found below 0.45 per cent colchicine, the standard in the later edition of the Pharmacopœia, while all others have been below the original standard of 0.55 per cent colchicine.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 124.

Sayre, L. E., reports on 11 samples of colchicum seed; 7 passed; 4 illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1096.

Thome, E. R., thinks that the standard for colchicum seed is too low to obtain a fluid extract of 0.4 per cent colchicine.—Practical Druggist, 1910, v. 28, p. 122.

Havenhill, L. D., outlines a formula for making the tincture of colchicum seed and suggests that this preparation should assay by the official process 0.04 gm. of colchicine in each 100 cc.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 787.

Dohme and Engelhardt state that the Ph. Hung. III directs that tincture of colchicum contain 3 per cent of extractive matter.—*Ibid.* p. 1193.

COLCHICINA.

Scoville, W. L., states that 4 lots of colchicine varied in melting point from 116° to 126°. Evidently pure colchicine is not easily obtained in commercial quantities.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 743.

Rosenthaler and Görner in discussing the use of aromatic nitro-derivatives as precipitants for alkaloids report that *m*- and *p*- nitrophenol also tetranitrophenolphthalein produce an opalescence in solutions of colchicine. The precipitated material separates out in the form of oily drops, no crystals are formed.—Ztschr. anal. Chem., 1910, v. 49, p. 348.

Fühner, Hermann, reports on the toxicological determination of colchicine.—Arch. exper. Path. u. Pharmakol., 1910, v. 63, pp. 357–373. See also editorial, Lancet 1910, v. 179, p. 1432.

Maurel and Arnaud find that under the influence of colchicine the excretion of the waste products of the organism is increased, this would seem to offer a plausible explanation of the good results from such preparations in plethoric affections, notably gout.—Compt. rend. Soc. Biol. 1910, v. 68, p. 129.

A subsequent note deals with the mechanism of the reaction.—*Ibid.* p. 170. See also pp. 414, 608, 675.

COLLODIUM.

Gane and Webster assert that collodion is subject to considerable variation in viscosity, according to the pyroxylin used, which latter needs more careful definition. Acetone has been suggested as a better solvent and has much to commend it. It is cheaper and yields a much better adhering film. The addition of camphor is a further improvement giving a tougher and more durable film.—Drug Topics, 1910, v. 25, p. 100.

Rosengarten, George D., points out that the U. S. P. VIII requires 40 gm. gun-cotton to be dissolved in 750 cc. ether and 250 cc. alcohol, whereas the U. S. P. 1890 required only 30 gm. in the same amount of solvents. The increased quantity of gun-cotton has caused some trouble, where collodion is used as a base for preparations.—Am. J. Pharm. 1910, v. 82, p. 31.

Breves, Rudolph, in commenting on the possible change in the form of the official pyroxylin, suggests that amyl acetate, with the addition of a small amount of amyl alcohol, be used as a solvent. This would produce a collodion of less inflammability and at the same time give a product of more flexibility.—Practical Druggist, 1910, v. 28, p. 39.

Dohme and Engelhardt outline the Ph. Hung. III test for collodion.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1176.

Hommell, Philemon E., suggests the addition of a number of additional formulas for collodions.—Merck's Rep., 1910, v. 19, p. 121.

COLLODIUM CANTHARIDATUM.

Mittelbach, William, declares that collodium cantharidatum and collodium stypticum are readily made extemporaneously, and might well be transferred to the National Formulary.—Proc. Missouri Pharm. Ass., 1910, p. 98.

COLLODIUM FLEXILE.

Breves, Rudolph, thinks that Canada turpentine should be eliminated from the formula for flexible collodion, and if an oleoresin is necessary he suggests adding elemi (Manila) or gurjun balsam.—Practical Druggist, 1910, v. 28, p. 39.

Patch, Edgar L., says that one lot of flexible collodion contained but 75 per cent of the required amount of solids.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 743.

COLOCYNTHIS.

Gane and Webster assert that the title "Colocynthis" should be changed to "Colocynthidis pulpa," and limits should be fixed for ash and fixed oil, so as to exclude seeds. The ash should not exceed 10 to 12 per cent and a petroleum benzin extract should not exceed 0.5 per cent.—Drug Topics, 1910, v. 25, p. 100.

Francis, J. M., reports that colocynth apple in the main has been of very good quality, though there has been more or less offered on the market of the United States in the form of crushed colocynth, concerning the botanical identity of which there could be some doubt, and there certainly is considerable doubt as to the quality of very much of this crushed or ground colocynth from a therapeutic viewpoint.—Proc. Pennsylvania Pharm. Ass., 1910, p. 137.

Sechler, H. M., discusses the relation of seed and pulp in commercial colocynth, and asserts that it is not commercially possible to exclude every seed, as a few at least are frequently found imbedded in the pulp itself.—Am. Druggist, 1910, v. 57, pp. 336–337. See also Proc. Pennsylvania Pharm. Ass., 1910, pp. 319–320.

Beal, George D., says that colocynth must be powdered without the seeds if it is to answer the U. S. P. requirements. Dealers are offering it as "Colocynth Apple," claiming that, as this name does not appear in the Pharmacopœia, no standard of purity exists for it, and it may be adulterated in any way they desire. However, this must not be sold as powdered colocynth.—Proc. Ohio Pharm. Ass., 1910, p. 71.

Rusby, H. H., points out that while the Pharmacopœia provides that seeds be removed before using, it is not practicable to remove all of these seeds, so that there should be a permissible limit, probably about 5 per cent, and the powdered article should be separately defined as containing such an admixture of seeds.—Drug. Circ., 1910, v. 54, p. 617.

Schneider, Albert, points out that colocynth pulp contains very large thin-walled parenchyma cells, empty. The peel consists of sclerenchyma cells. The seeds show a palisade tissue and sclerenchyma cells. Generally the peel and seeds are included, which, according to the U. S. P., should be excluded.—Merck's Rep., 1910, v. 19, p. 63.

Mansfield, William, discusses the microscopical examination of powdered colocynth, and presents illustrations showing the structural characteristics of powdered colocynth rind, powdered colocynth seed and powdered colocynth, U. S. P.—Drug Circ. 1910, v. 54, pp. 56–57.

Dohme and Engelhardt state that the Ph. Hung. III directs that when colocynth is extracted with alcohol, 30 per cent of extractive matter should be obtained.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1176.

Power and Moore report experiments to determine the constituents of colocynth. They conclude that the so-called "colocynthin" and "colocynthitin" isolated by previous experimenters consisted of mixtures of a very indefinite character and that the amount of glucosidic substance present in colocynth is extremely small.—J. Chem. Soc., Lond., 1910, v. 97, pp. 99–110. Also Chem. & Drug. 1910, v. 76, p. 150.

LaWall and Bradshaw report finding 12.38 per cent ash in colocynth.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Kebler, L. F., thinks ash determinations in connection with colocynth can be taken as an indication of the presence or absence of seed. If a considerable quantity of seed is found the ash is proportionately low.—*Ibid.* p. 755.

Notice of Judgment No. 390 relates to adulteration and misbranding of powdered colocynth.

Rusby, H. H., states that he has met with powdered colocynth consisting, in 13 cases out of 15, either wholly or partly of the worthless seeds.—Practical Druggist, 1910, v. 27, p. 424.

He also asserts that the grinding of the seed with the pulp of colocynth is not uncommon and that in many cases the seed rejected by one house will be ground separately and sold for colocynth by another.—Drug. Circ., 1910, v. 54, p. 7.

Beilstein, Christian, reports that in preparing liquid preparations of colocynth it has long been customary to base calculation upon the weight of the whole fruit, including both the dried pulp and the seeds. He asserts that if the liquid preparations should be based on the pulp alone they would be 2 to 3 times as active as they customarily are now.—Proc. N. W. D. A., 1910, p. 102.

According to "Le Pharmacie Française," colocynth was famous in its day and figured in the *ex duobus* of the London Pharmacopœia, as well as in that remarkable Arthanita ointment, which (Baumé assures us) acted as an emetic when placed on the upper portions of the stomach and as an aperient when applied to the lower regions.—Chem. & Drug. 1910, v. 76, p. 5.

Fornias, E., quotes Wassily who points out that colocynthis acts especially on the intestines and is indicated in neuralgias.—Hahnemann, Month, 1910, v. 45, p. 552.

Adams, F. X., points out that colocynth is the remedy for cramps of the stomach or bowels, due to spasms of either. It is not the remedy for cramps due to accumulation of gas.—Eclectic M. J., 1910, v. 70, p. 75.

Osborne, Oliver T., thinks it probable that colocynth could be dropped without any serious loss of cathartic efficiency.—J. Am. M. Ass., 1910, v. 54, p. 291.

CONDURANGO.

Tunmann, O., asserts that condurango bark has been imported into Europe steadily since 1871 in varying quantities. The imports into Hamburg for 1901 were estimated at 150,000 kg., and for 1909 at 40,000 kg.—Apoth. Ztg., 1910, v. 25, p. 558.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 25) point out that the Ph. Germ. now describes condurango bark as being from 2 to 5 mm. thick in place of from 2 to 7 mm. as formerly given.

LaWall and Bradshaw report finding 6.7 and 8.84 per cent ash in condurango bark.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Linke, in a contribution on the preparation and testing of fluidextracts, discusses the nature and composition of fluid extract of condurango and reports a number of experiments with this preparation.—Apoth. Ztg., 1910, v. 25, pp. 529–531; 543.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 30) point out that the Ph. Germ. V directs that the fluid extract of condurango be made with a mixture of water and alcohol, omitting the glycerin formerly employed. They state that a good fluid extract of condurango should have a specific gravity of from 1.035 to 1.06; leave from 16 to 20 per cent of extract, and from 1.5 to 1.9 per cent of ash.

CONIUM.

Schneider, Albert, calls attention to the structural characteristics of conium seeds and states that the drug may be adulterated with other umbelliferous fruits.—Merck's Rep., 1910, v. 19, p. 63.

LaWall and Bradshaw report finding 6.85 per cent ash in conium seed.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Butler, George F., states that the hemlock which in this country yields conium, is devoid of the active principle when grown in Scotland.—N. York. N. J., 1910, v. 92, p. 953.

Rosenthaler and Görner in discussing the use of aromatic nitroderivatives as precipitants for alkaloids state that dinitroanthrachrysondisulphonic acid produces characteristic crystals with coniine.—Ztschr. anal. Chem., 1910, v. 49, p. 348.

Scoville, W. L., thinks that the official assay for conium is tedious. Since coniine has a markedly alkaline reaction, and is easily titrated, a volumetric assay would seem to be preferable. The alkaloid may be extracted from an alkaline (carbonate) solution by ether, the ethereal solution evaporated by an air blast over a measured quantity of decinormal acid, and the latter titrated.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 822. See also p. 881.

Lyons, A. B., thinks that it is simpler and better to determine coniine by alkalimetrical titration than by weighing as in the pharmacopœial assays.—*Ibid.* p. 777.

Beilstein, Christian, reports that one lot of conium leaves contained only about one-third as much alkaloid as the average drug.—Proc. N. W. D. A. 1910, p. 105.

Puckner and Warren present a paper on coniine as a pharmaceutical impossibility.—J. Am. M. Ass., 1910, v. 54, p. 629. See also Rep. Chem. Lab. Am. M. Ass., 1910, v. 3, pp. 14–17.

Vanderkleed, Chas. E., reports 4 assays of conium fruit; lowest, 0.600, highest 0.744 per cent coniine; all above standard.—Proc. Pennsylvania Pharm. Ass., 1910, p. 147.

Sayre, L. E., reports on 14 samples of conium fruit: 9 passed; 5 illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1096.

Gane and Webster assert that conium is an uncertain drug, rarely prescribed, probably owing to the fact that most of the galenical preparations have been inert or nearly so. Conium rapidly deteriorates on storage and galenical preparations also, and there are few potent drugs subject to such great variation in strength. If gathered at the proper time, that is just before the fruit ripens, it may contain as high as 3.5 per cent of coniine. The commercial article rarely, however, contains as much as one per cent, owing to collection when the fruit is nearly ripe. The official assay process is quite as unreliable as the crude drug, and it would be the part of wisdom to drop the crude drug and admit the alkaloid in its place, if it is found necessary to retain any conium preparations.—Drug Topics, 1910, v. 25, p. 100.

Engelhardt, Hermann, think that there is no reason for retaining this obsolete drug in the Pharmacopœia, inasmuch as all the samples which were examined in the laboratory had to be rejected as they contained scarcely any coniine.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1257.

Thome, E. R., asserts that conium is no longer used by the profession, hence should be dismissed from the Pharmacopœia.—Practical Druggist, 1910, v. 28, p. 122.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 31) report that a sample of extract of conium from a batch manufactured by themselves last summer yielded 0.40 per cent of total alkaloids as hydrochlorides, this being about an average result. A second sample from another source proved to contain 0.27 per cent.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 26) report testing 1 sample of conium extract which contained 0.5 per cent of conine.

Leming, W., asserts that the particular field of action of conium has seemed to be the brain, breast and abdominal organs, although it has not been thoroughly proved in its effects on the pneumogastric nerve.—Eclectic M. J., 1910, v. 70, p. 133.

Monroe, A. Leight, quotes Walter Joel Brown who recommends conium mac. in the treatment of obstinate, indurated acne of the face; especially adapted to scrofulous persons and old maids or after suppression of menses.—Hahnemann, Month, 1910, v. 45, p. 716.

Harbert, J. P., states that conium is one of our most useful remedies for quieting extremely nervous irritability accompanying certain eye disorders. As a rule, the nervousness is out of all proportion to the eye condition which seems to give rise to it.—Eclectic M. J., 1910, v. 70, p. 70.

CONVALLARIA.

Holm, Theo., describes and illustrates the structural characteristics of *Convallaria majalis* L.—Merck's Rep., 1910, v. 19, pp. 160–162.

Schneider, Albert, enumerates the structural characteristics found in convallaria, and states that this drug may be adulterated with true as well as false Solomon's seal.—*Ibid.* p. 190.

LaWall and Bradshaw report finding 9.26 per cent ash in convallaria root.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Githens and Vanderkleed discuss the physiologic standardization of cardiac stimulants and present a standard for fluid extract and tincture of convallaria.—*Ibid.* p. 918.

Wood, H. C. Jr., recommends the guinea pig method for standardizing convallaria.—*Ibid.* pp. 941–942.

Caesar & Loretz (Jahres-Ber., 1910, p. 45) report that a tincture of the root of *Convallaria majalis* tested physiologically gave the unusually high value of 8.2.

Gane and Webster assert that convallaria is as uncertain and unreliable as either digitalis or strophanthus and probably for the same reason. The glucosides obtained from it should replace it as far as possible, as there is much more certainty surrounding their use than is the case with the crude drug.—Drug Topics, 1910, v. 25, p. 100.

Osborne, Oliver T., would omit convallaria and its fluid extract from the Pharmacopœia.—J. Am. M. Ass., 1910, v. 54, p. 468.

COPAIBA.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 13) point out that the Ph. Germ. V requires an acid number of from 75.8 to 84.2, and a saponification number of from 84.2 to 92.7 for copaiba. They regret that the Bosetti test for rosin was not included as the acid and saponification number are of value only when the absence of rosin and gurjun balsam can be demonstrated. In testing for gurjun balsam a fragment of sodium nitrite gives more accurate results than the prescribed solution.

Hartwich, C., criticizes the Ph. Germ. V monograph for copaiba, and expresses the belief that the acid number and saponification number are startling.—Apoth. Ztg., 1910, v. 25, p. 1035.

Riedel's Berichte (1910, p. xxvii) points out that pure balsam of copaiba is dextrorotary, or inactive, while the adulterated article is generally lævorotary.

Dohme and Engelhardt state that the Ph. Hung. III gives the specific gravity of balsam of copaiba as 0.94 to 0.99, thus allowing a balsam with only a comparatively small amount of volatile oil. No requirements for the acid and saponification numbers are given. As the test for rosin, the unreliable test with ammonia water is given.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1173.

Caesar and Loretz (Jahres-Ber., 1910, p. 77) outline their requirements and tests for copaiba and present a table showing the variations in specific gravity prescribed by various pharmacopœias. They recommend a limitation of from 0.970 to 0.990 at 15°.

Davis, James E., reports that the cheaper Central American balsams pass the tests more readily than the more expensive Para.—Proc. Michigan Pharm. Ass., 1910, p. 62.

Wiley, H. W., reports that a continuation of the study of copaiba shows that the South American products as a rule are dextrorotary. This is due to the resin present, which is dextrorotatory, and since its specific rotation is about $+78°$ in alcohol, while that of the oil is $-7°$ to $-35°$, the balsam, due to the percentage of resin is dextrorotatory.—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 472.

Gane, E. H., states that copaiba is a perennial source of trouble, due to the varying character of the commercial product and to the inadequacy of the official tests. While it is no doubt advisable to specify a particular grade for dispensing purposes, yet, in view of the fact that the U. S. P. is now a legal standard, the general description should be enlarged to include under the term "Copaiba" the lighter varieties of oleo-resin, which the trade more generally prefers. The official tests are wholly inadequate to detect the more subtle forms of sophistication, and samples are readily "faked" to pass them. Unfortunately, the oleo-resin itself varies so in composition, according to its source, that it is not easy to devise a series of adequate tests.—Drug Topics, 1910, v. 25, p. 212.

Cocking, T. Tusting, contributes a note on the detection of Africa copaiba, with tabulated statements of the optical rotations of the volatile oils and fractions thereof.—Chem. & Drug., 1910, v. 77, p. 119.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 146) call attention to various communications on the detection of gurjun balsam in balsam of copaiba.

Breves, Rudolph, thinks that for copaiba the ester value should be given as stated in the German Pharmacopœia.—Practical Druggist, 1910, v. 28, p. 39.

Caesar & Loretz (Jahres-Ber. 1910, p. 8) find the Turner test for gurjun balsam consistently reliable.

Wiley, H. W., states that of 105 shipments of copaiba entered only 2 per cent contained foreign resins. Copaiba has improved to such an extent that the South American importations are practically pure. Five large shipments of African balsam were entered, consisting of about 200,000 pounds.—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 470.

Bernegau, L. H., reports that of 16 lots of copaiba examined, all were free from gurjun balsam and met U. S. P. requirements with regard to percentage of resinous mass left on heating for 48 hours on the water bath, the percentage ranging from 52.57 to 65.1 per cent. One sample of African balsam was found to be free from gurjun balsam but tested only 35.48 per cent of resinous mass.—Proc. Pennsylvania Pharm. Ass., 1910, p. 137.

McKeogh, Robert P., reports examining 10 samples of copaiba: 8 contained gurjun balsam, 2 contained an excess of resin by the ammonia test, and 4 contained an excess of acid resin by the alcoholic potassium hydrate titration method.—Proc. Massachusetts Pharm. Ass., 1910, pp. 158–159.

Evans Sons Lescher & Webb (Analytical Notes, 1910, pp. 26–28) report examining 41 samples of copaiba; and present the physical properties of the oils derived therefrom.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 9) found 5 samples of copaiba to have specific gravity from 0.985 to 0.988; resin, 57.12 to 68.98; acid number, 78.50 to 89.34; ester number, 3.84 to 10.50; resin acid factor, 0.71 to 0.77.

Osborne, Oliver T., thinks that copaiba and cubeb are not needed, as the oil of santal seems to be the best stimulant in subacute or chronic inflammation of the urinary tract.—J. Am. M. Ass., 1910, v. 54, p. 377.

CORIANDRUM.

Fichtenholz, A., quotes Tschirch as authority for the statement that the word coriander comes from *koris*, meaning bug, because of the bug-like odor of the green fruit.—J. pharm. et chim. 1910, v. 2, p. ii.

Schneider, Albert, points out that coriander presents the general histological characteristics of umbelliferous fruits, and may be adulterated with stems and leaf.—Merck's Rep., 1910, v. 19, p. 190.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 41) report that the Russian output during this year is almost negligible.

LaWall and Bradshaw report finding from 4.55 to 8.10 per cent ash in coriander seed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Gane, E. H., thinks an ash limit for coriander might be included though the drug is rarely used in powder form. The ash should be from 5 to 6 per cent.—Drug Topics, 1910, v. 25, p. 212.

CREOSOTUM.

Gane, E. H., asserts that the statement that creosote "should not become brown in color on exposure to light" needs revising. All commercial creosotes darken on exposure. A limit might also be set to the high boiling fraction. "Most of it comes over balsam between 200° and 220°" is not very definite. The spelling of the word is probably by now too well entrenched to change, but it may nevertheless be pointed out that the older form "Creasote" was etymologically more correct.—Drug Topics, 1910, v. 25, p. 212.

Dohme and Engelhardt state that the Ph. Hung. III directs that the specific gravity of creosote be 1.08 to 1.09 and the boiling point from 200° to 220°. It should not become solid even when cooled to −20°.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1186.

Vanderkleed, C. E., reports that of 8 lots of creosote tested, all but one were slightly low in specific gravity. When the minimum specific gravity was changed, on May 1, 1907, from 1.072 to 1.078, it is possible that the limit was placed a little too high.—Proc. Pennsylvania Pharm. Ass., 1910, p. 137.

Sayre, L. E., reports on 5 samples of creosote: 1 passed; 4 illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1096.

CRESOL.

The monograph for crude cresol to be embodied in the Ph. Germ. V requires that this article contain at least 56 per cent of *m* cresol; also includes a method of assay.—Proc. Zentralh. 1910, v. 51, p. 206.

Raschig, F., criticizes the Ph. Germ. requirements for phenol and cresol. In connection with cresol he points out that the assay requirement should be modified.—Pharm. Ztg., 1910, v. 55, pp. 1055–1056.

Hailer, E., reports a number of experiments to determine the relative value of acids in increasing the disinfectant value of phenol and cresol.—Arb. a. d. k. Gsndhtsamte. 1910, v. 33, pp. 500–515.

Gane, E. H., points out that as generally obtainable cresol is far from answering the official requirements of "a colorless or straw colored liquid, turning yellowish-brown on exposure to light." It is usually of the reddish-brown color characteristic of crude phenol, more or less of which is frequently found in the cresol of commerce. The official test for phenol is not sufficiently delicate. A more accurate characterization of this article is needed in the Pharmacopœia.—Drug Topics, 1910, v. 25, p. 212.

Rippetoe, John R., thinks that the required specific gravity of cresol, namely 1.036 to 1.038, is within too narrow limits. Seventeen samples examined by him varied in specific gravity from 1.031 to 1.0385 at 25°.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1061.

Dulière, Walter, discusses crude and saponified cresols, their characters and their control.—Ann. pharm. Louvain, 1910, v. 16, pp. 489–496.

Mann, J. C., presents notes on the testing of coal tar creosote.—J. Soc. Chem. Ind., 1910, v. 29, pp. 732–735.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 29) report that 2 samples of the best grade cresylic acid had a specific gravity, 1.0385 to 1.041; boiling point, 193° to 198°. Both were soluble to a clear solution in 10 per cent KOH. One inferior sample submitted boiled from 170°–200°, and had a specific gravity, 1.033. Forty per cent of it was not dissolved by 10 per cent KOH, indicating a high hydrocarbon content, and a correspondingly low germicidal value.

Bistrzycki and Weber discuss the condensation of diphenylene glycolic acid with phenols and phenol ethers.—Ber. deutsch. chem. Gesellsch., 1910, v. 43, pp. 2496–2505.

Lewis, I. Giles, discussing the use of cresol and preparations containing it, states that more than 40 years ago when carbolic acid first made its appearance in the medical world, Squibb did not give his unqualified endorsement, but at that time made the statement that the dark colored acid was much more efficient than the colorless crystals. It is only in late years that this opinion regarding cresol has been verified.—Northwestern Druggist, 1910, v. 11, June, p. 61.

McClintic, Thomas B., discusses the use of tricresol as a disinfectant.—Public Health Bulletin No. 42, 1910, Washington, 1911, p. 21.

Raper, Howard R., comments on the use of a mixture of equal parts of cresol and solution of formaldehyde as strong, penetrating disinfectant and deodorant.—Dental Digest, 1910, v. 16, p. 661. Also Dental Cosmos, 1910, v. 52, pp. 559–661.

Buckley, J. P., suggests the use of a mixture of cresol and formaldehyde in the treatment of putrescent pulps and abscessed roots.—Dental Cosmos, 1910, v. 52, p. 430.

See also under Liquor Cresolis Compositus.

CRETA PRÆPARATA.

Gane, E. H., points out that prepared chalk according to the U. S. P. is often molded into "conical drops." The trade understands perfectly what is meant by this phrase, but what would the uninitiated understand by a "conical drop?" He asks why not say into "cones" simply? Soluble in dilute acids "leaving no more than a trifling residue" is rather inexact. It would be better to fix a definite limit of 1 per cent and specify the objectionable impurities, as in former editions. Barium should be entirely absent, and not more than traces of magnesium, aluminum, sulphates and silicates, present in a good article.—Drug Topics, 1910, v. 25, p. 212.

CROCUS.

The Chemist and Druggist (1910, v. 76, p. 779) presents a tabulation of the quotations for crocus for the past ten years and the production for the past three years.

Xrayser II, writing of the antiquity of crocus, says its vogue in medicine was enormous; it is said that in the fifteenth century several persons were burnt to death at Nuremberg for adulterating it. The name is of Arabic origin.—*Ibid.* p. 817.

Tunmann, O., states that the bulk of commercial saffron is produced in Spain, the export from that country in 1901 aggregating 87,500 kg. He presents data showing the destination of much of the drug.—Apoth. Ztg., 1910, v. 25, p. 718.

An abstract (from Consular Report) presents a table showing the average production of saffron in the several provinces of Spain.—Oil, Paint and Drug Reporter, 1910, v. 78, November 14, p. 28F.

Schneider, Albert, enumerates the structural characteristics of crocus, and states that this drug is frequently loaded with emery, gypsum, chalk, etc.; or filled with oils and glycerin.—Merck's Rep., 1910, v. 19, p. 190.

Beythien, A., discusses the valuation of saffron and reports a number of analyses. The ash content in 112 samples varied from 3 to 10 per cent; only 7 of these samples exceeded 8 per cent, and he concludes that a maximum limit of 8 per cent of ash would not be asking too much.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 19, pp. 365–367.

Oberndörfer, Adolf, criticizes the proposed methods for estimating saffron as outlined by Beythien.—Ztschr. offentl. Chem., 1910, v. 16, pp. 191–193.

Evans, J., asserts that saffron, owing to its high price, is liable to gross adulteration. Particles should be picked out and examined, and carefully compared with the description given in the Pharmacopœia. When a fragment is placed in a glass of warm water it should color the liquid a deep orange yellow and become itself paler in color and should yield no deposit. Each fragment of the drug should yield a deep transient blue color on touching strong sulphuric acid. It should not deflagrate when ignited, and should yield about 17.0 per cent of ash. It should contain not more than 12.5 per cent of moisture.—Brit. & Col. Drug., Lond., 1910, v. 57, p. 133.

Rusby, H. H., states that he has met with Spanish saffron consisting of spurious substances weighed and dyed in innumerable ways, some of the substances employed being of such a nature that they would be certain to bring about the destruction, with possibly fatally poisonous consequences, of many prescriptions to which they might be added.—Practical Druggist, 1910, v. 27, p. 424.

Beilstein, Christian, reports saffron containing an excessive proportion of styles.—Proc. N. W. D. A. 1910, p. 100, 103.

Collin, Eug., presents an illustrated paper on saffron and its adulterations.—J. pharm. et chim. 1910, v. 2, pp. 529–540. See also Ann. Falsif. 1910, v. 3, pp. 353–369.

Brierre Fils, Pithiviersen-Gatinais (Loiret), call attention to a new adulteration of saffron detected by Adrian. The weight of the sample had been increased by the addition of 40 per cent of soluble salts, identified as sodium sulphate, sodium chloride, borax, ammonium nitrate and potassium carbonate. The last named is thought to have been introduced in the form of incinerated cream of tartar.—Chem. & Drug. 1910, v. 77, p. 874.

Caesar & Loretz (Jahres-Ber., 1910, pp. 87–90) outline their method for determining the ash content of saffron; also their method for determining the tinctorial power of this drug, and present a table showing the requirements made by the several pharmacopœias.

LaWall and Bradshaw report finding 4.1 per cent ash in crocus stigmatis.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 64) report that 13 samples of saffron, chiefly from French and Spanish sources, were tested. Those which had an adequate color intensity and were otherwise satisfactory had the following range: ash, 4.7 to 5 per cent; moisture, 9.7 to 13 per cent. Six badly adulterated samples were rejected.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 15) report that 10 samples of saffron have been examined, the amount of moisture being usually in excess of the 12.5 per cent limit of the Pharmacopœia, while in but one case did the amount of ash exceed the official amount, the mineral matter in this instance being undoubtedly added fraudulently.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 27) point out that the Ph. Germ. V continues to restrict the ash content of saffron to 6.5 per cent and the moisture content to a maximum of 12 per cent. Additional tests for possible adulterants have been added, including the ammonium salts, sugar and fats.

Cornalba, G., contributes a note on an artificial saffron.—Boll. chim. farm. 1910, v. 49, p. 890.

Lemaire, Paul, presents a note on the characters and falsification of saffron.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 422–429.

The Local Government Board (38th Ann. Rep. Part II) reports 5, out of 34, samples of saffron examined in 1908, not standard.—Pharm. J. 1910, v. 30, p. 33.

Kebler, L. F., asserts that the adulteration of saffron is demoralizing the trade. He points out that the addition of 5 per cent of foreign material should be sufficient to make a fairly good profit.—Proc. Maryland Pharm. Ass., 1910, p. 122.

CUBEBA.

Heinrich Haensel (Bericht, October–March 1909–10, pp. 22–23) reports that the overproduction of cubeb in Java some years ago has now resulted in an underproduction and a consequent increase in price. The really desirable drug is at the present time not to be had.

Schneider, Albert, enumerates the structural characteristics of cubeb and points out that this drug is adulterated with a variety of foreign vegetable substances as juniper berries, buckthorn fruit, etc. Excess of stems should be expected.—Merck's Rep., 1910, v. 19, p. 190.

Rusby, H. H., points out that cubeb very frequently contains 25 per cent or more of stalks, and suggests that the limit should be 5 per cent.—Drug. Circ., 1910, v. 54, p. 617. See also Practical Druggist, 1910, v. 27, p. 424.

Kebler, L. F., points out that the Pharmacopœia requirement for cubeb berries is vulnerable in several particular points.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 593.

Caesar & Loretz (Pharm.-Ber., D. A. B. 5 [1910], 1911, p. 28) point out that the macroscopical and microscopical description of cubeb has been elaborated so as to apply to the powder and that the ash content of the drug is restricted to a maximum of 8 per cent in the Ph. Germ. V.

LaWall and Bradshaw report finding 5.7 and 6.1 per cent ash in cubeb berries.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Gane, E. H., points out that the virtues of cubeb being largely, if not wholly, due to the oleo-resin it contains, an assay process for this constituent would be of value. The ether soluble extract of prime drug should be about 20 per cent. Ash, not to exceed 7 per cent.—Drug Topics, 1910, v. 25, p. 212.

Vanderkleed, Chas. E., reports 6 assays of cubeb; lowest, 18.42; highest, 24.40 per cent oleoresin; all above standard.—Proc. Pennsylvania Pharm. Ass., 1910, p. 147.

An editorial (Drug Topics, 1910, v. 25, p. 2) in discussing the sophistication of crude drugs, states that a package of cubeb berries heavily loaded with stalks was admitted, as the importer agreed to label the package "cubeb berries with stalks". It was intimated that after the package had been passed the label was removed and the supply found its way into consumption as cubeb berries of pharmacopœial standard.

Rusby, H. H., states that cubeb must be deprived of stalks before being used medicinally, but this, or the drug too old for medicinal preparations, may be wanted for the distillation of oil, and must be admitted if correctly labeled.—Drug Circ., 1910, v. 54, p. 6.

Sayre, L. E., reports on 1 sample of powdered cubeb: illegal.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1096.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 29) report that 3 samples of cubeb berries were genuine and gave the sulpuhric acid reaction, but only two were satisfactory. The third sample contained a large number of fruits, with shapeless shrunken seeds, yielding a powder with a low oil content; the latter may be gauged comparatively by pressure between white glazed paper.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 9) report that 5 samples of cubeb examined proved to be very stalky in character and to give very indifferent results when extracted by petroleum spirits, the percentages obtained ranging from 4.66 to 8.78 with an average of 6.95.

Dohme and Engelhardt state that according to the Ph. Hung. III oleoresin of cubeb is made by extracting the powdered cubeb with a mixture of equal parts of ether and alcohol.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 1179.

Osborne, Oliver T., thinks that fluid extract of cubeb could be omitted, as the oleoresin is the best preparation.—J. Am. M. Ass., 1910, v. 54, p. 377.

CUPRI SULPHAS.

Dolphin, H. E., in English patent 8555, April 8, 1909, outlines a method for the manufacture of copper sulphate.—J. Soc. Chem. Ind., 1910, v. 29, p. 488.

Gane, E. H., points out that the solubility figures given by different authorities for copper sulphate vary. A special test for zinc should be included, as this is a common impurity.—Drug Topics, 1910, v. 25, p. 212.

Riedel's Berichte (1910, p. xxviii) suggests that a small quantity of iron be permitted in copper sulphate.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 28) report that 16 samples of pure copper sulphate tested contained iron sulphate in quantities varying from 0.2 to 0.6 per cent.

Uhlenhuth, Rudolf, describes a new reaction for copper with 1, 2-diamidoanthraquinone-3-sulphonic acid.—Chem. Ztg. 1910, v. 34, p. 887.

Recoura, A., (Bull. Soc. Chim., 1910, 7, 832–834) discusses the determination of copper as anhydrous cupric sulphate.—J. Soc. Chem. Ind., 1910, v. 29, p. 1179.

Sanchez, Jean A., (Bull. Soc. chim. France 4, 7, 9–17) outlines a new volumetric method for the determination of copper.—Apoth. Ztg., 1910, v. 25, p. 138.

An unsigned article (Drug Topics, 1910, v. 25, p. 323) calls attention to some special uses of copper sulphate.

Springer and Springer discuss the antiseptic properties of copper and report a number of observations on the preservation of milk.—Chem. Ztg., 1910, v. 34, pp. 585–586; 595–596.

Springer, Alfred, comments on the selective antiseptic action of copper salts.—*Ibid.* pp. 734–735.

Brady, William, states that instantaneous emesis follows copper sulphate in doses of one grain (0.06 gm.) dissolved in a few cubic centimeters of water; this is the dose for a child.—N. York M. J., 1910, v. 91, p. 210.

Osborne, Oliver T., asserts that the only preparation of copper that is used therapeutically is the sulphate, and this salt is never used in any way except as a mild cauterizer in the form of the blue stick, or as a very efficient emetic. He adds that when used as an emetic care should be taken to remove it if it be not quickly vomited.—J. Am. M. Ass., 1910, v. 54, p. 133.

CUSSO.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 32) point out that the Ph. Germ. V limits the ash content of cusso to 9 per cent.

LaWall and Bradshaw report finding 20.7 per cent ash in cusso flowers.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 752.

Gane, E. H., points out that cusso is very little used at present and not available in large quantity. Loose cusso frequently consists largely of staminate flowers, which are reputed less active than the pistillate. The drug is not of sufficient importance to warrant inclusion in the Pharmacopœia.—Drug Topics, 1910, v. 25, p. 213.

CYPRIPEDIUM.

Rusby, H. H., states that there is little doubt that a considerable quantity of *Cypripedium acaule* is collected and sold for the official article. It is probably of equal value with the latter and before incorporating differential characters into the Pharmacopœia, this question should be settled.—Drug. Circ., 1910, v. 54, p. 616.

Schneider, Albert, notes the microscopical characteristics of cypripedium and expresses the belief that this drug is very little used.—Merck's Rep., 1910, v. 19, p. 191.

Gane, E. H., thinks that cypripedium, an Eclectic remedy, supposed to be of value as a nerve stimulant and anti-spasmodic, should be dismissed from the Pharmacopœia. Its active principles, if it has any, are unknown.—Drug Topics, 1910, v. 25, p. 213.

DECOCTA.

Gane, E. H., characterizes decoctions as a survival of mediæval pharmacy, which should be permitted to lapse into inoccuous desuetude.—Drug Topics, 1910, v. 25, p. 213.

Dohme and Engelhardt state that the Ph. Hung. III directs that decoctions be made by mixing the drug with the prescribed amount of cold distilled water and exposing this mixture to live steam for 30 minutes with frequent stirring. After cooling the liquid is filtered. Decoctions are supposed to be of 10 per cent strength, unless a stronger preparation is ordered by the physician, and are to be made when prescribed and should never be kept in stock.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1176–1177.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 28) point out that the Ph. Germ. V prescribes that decoctions are to be made from comminuted drugs and, unless otherwise directed, are to be strained while still warm.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, p. 220) discusses the method of making decoctions.

DIACETYL-MORPHINE.

Hunt, Reid, reports that diacetyl morphin is included in the Ph. Ital., Ph. Japon., Ph. Mex., Ph. Russ., Ph. Helv.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

Scoville, W. L., states that genuine heroin varied in melting point from 164° to 171°.—*Ibid.* p. 743.

Rosenthaler and Görner, in discussing the use of aromatic nitro-derivatives as precipitants for alkaloids, state that tetranitrophenolphthalein and hexanitrodiphenylamine are more sensitive for heroin than is picric acid.—Ztschr. anal. Chem. 1910, v. 49, p. 346.

Brady, William, notes that both heroin and codeine are frequently found to be contaminated with morphine.—N. York M. J. 1910, v. 91, p. 211.

Zeelen, Victoire, reports observations on the influence of heroin on the action of morphine.—Ztschr. exper. Path. u. Therap. 1910, v. 8, p. 595.

Wood, H. C., Jr., points out that although heroin is twice as poisonous as morphine it is twice as safe because the limit between the therapeutic and toxic dose is larger.—J. Am. M. Ass. 1910, v. 55, p. 31.

Stieren, Edward, reports a case of blindness from heroin in the nostrum "Habitina."—*Ibid.* v. 54, p. 869. See also pp. 880 and 889.

Eycmans, Fr., suggests that heroinomaniacs may soon add to the army of neurotics, and cautions pharmacists as to the sale of these dangerous medicaments.—J. pharm. Anvers, 1910, v. 66, p. 649.

DIACETYL-MORPHINE HYDROCHLORIDE.

Schaefer, George L., asserts that in all the publications pertaining to diacetyl morphine hydrochloride the formula is written $C_{17}H_{17}(C_2H_3O)_2NO_3HCl$, this having reference to the anhydrous salt, which, however, cannot be made commercially. The salt when freshly prepared contains 3 molecules of water of crystallization.—Am. J. Pharm. 1910, v. 82, p. 220.

DIASTASE.

Beilstein, Christian, reports that the amylolytic power of commercial samples of diastase is usually quite low, and it is wise to investigate when samples are labeled, "Will convert 50 to 100 times its weight of starch." It will probably be found that it will convert only the minimum amount after prolonged contact.—Proc. N. W. D. A. 1910, p. 102.

DIGITALIS.

Xrayser II notes that the present attention given to digitalis is in strong contrast with the neglect it suffered for a century and a half after its first introduction into the pharmacopœia in 1650.—Chem. & Drug. 1910, v. 77, p. 861.

Kremers, Edward, discusses the various methods that have been followed in cultivating this drug.—Proc. Wisconsin Pharm. Ass. 1910, p. 36.

Schneider, Albert, thinks that digitalis is one of our most important vegetable drugs and should receive immediate attention on the part of the Revision Committee as to the commercial supply and the comparative value of different varieties.—Merck's Rep. 1910, v. 19, p. 191.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 34) point out that the Ph. Germ. V describes digitalis as the dried leaves from wild growing flowering plants of *Digitalis purpurea* Linné. The leaves as well as the powder are to be kept over freshly calcined lime, and are to be carefully protected from moisture and light and not to be kept more than 1 year.

Dohme and Engelhardt state that the Ph. Hung. III directs that the amount of extractive matter obtained from digitalis leaves, by extraction with alcohol, should be 30 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1177.

Beal, George D., reports that digitalis offered for import is often of very poor quality by reason of lack of care in drying, as the drug is very sensitive in nature. Some importers are unable to see why a lot of drug should be rejected merely because it is a little off color.—Proc. Ohio Pharm. Ass. 1910, p. 72.

Vanderkleed, C. E., reports that the scarcity of digitalis has resulted in an enormous increase in the cost of German digitalin. Digitalis of excellent quality grows prolifically on our northern Pacific coast, but the cost of labor in that section has so far prevented its being marketed.—Proc. Pennsylvania Pharm. Ass. 1910, p. 137.

See also comments by Francis, J. M.—*Ibid.* p. 137.

Butler, George F., asserts that digitalis growing wild on hills is much more active than that which is grown in the valleys or cultivated.—N. York M. J. 1910, v. 92, p. 953.

Rusby, H. H., states that the large rosette of root leaves of digitalis, existing at the close of the first season, can be collected at a very low cost and he doubts the reliability of evidence that such leaves are not sufficiently inferior to justify their rejection.—Drug. Circ. 1910, v. 54, p. 619. See also Practical Druggist, 1910, v. 27, p. 424, and Proc. Am. Pharm. Ass. 1910, v. 58, pp. 743, 810.

Caesar & Loretz (Jahres-Ber. 1910, p. 24), in commenting on the pharmacopœial requirements for digitalis, express the belief that the time of gathering is of less moment than the development of the leaves and the method of drying them. They assert that fully developed leaves of the first year plant, gathered in August or later, are quite as active as the leaves of the flowering plant.

Brown, Linwood A., points out that digitalis should be kept in air tight containers, and in the dark. It has been recommended that it be kept over unslaked lime.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 131.

Kebler, L. F., states that digitalis leaves are usually contaminated by adhering inorganic matter and suggests that a maximum ash limit be fixed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 755.

Beilstein, Christian, reports that one lot of digitalis leaves was found to consist largely of stems and first year leaves with a small proportion of Matico leaves. The drug was very poorly cured and contained splinters of wood and small twigs.—Proc. N. W. D. A. 1910, p. 105.

LaWall and Bradshaw report finding from 6.75 to 8.9 per cent ash in digitalis leaves.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Hatcher, Robert A., asserts that there is a particularly urgent need for the investigation of the various digitalis bodies with reference to dosage and methods of administration.—J. Am. M. Ass. 1910, v. 55, p. 749.

Rising, Adolf, discusses the chemical constituents of digitalis and comments on the relation existing between the constituents known or described.—Svensk. farm. Tidskr. 1910, v. 14, pp. 417–422.

Thome, E. R., asserts that it has been repeatedly demonstrated that digitoxin is the most active principle of digitalis. He asks why not therefore establish an assay method even if only of comparative value. A physiological test is, of course, more reliable, but cannot be carried out by the pharmacist.—Practical Druggist, 1910, v. 28, p. 122.

Burmann, James, discussing the digitoxin content of the leaves and preparations of digitalis, states that the digitoxin determined in the leaves or preparations of digitalis by the Keller method is not the true digitoxin but that it, nevertheless, affords a means of determining their value.—Bull. Soc. chim. France, 1910, v. 7, pp. 973–982.

Vanderkleed, Chas. E., reports 9 assays of digitalis leaf, lowest, 0.251, highest, 0.390 per cent digitoxin; 6 above and 3 below standard. —Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Krailsheimer, Robert, presents a contribution to the valuation of the activity of digitoxin and digitoxin-like substances.—Arch. exper. Path. u. Pharmakol. 1910, v. 62, pp. 296–304.

Fantus, Bernard, favors the introduction of the physiological assay of digitalis.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 154.

Gane, E. H., points out that no satisfactory chemical assay process has yet been devised, and the physiological assay so frequently suggested does not give uniform results.—Drug Topics, 1910, v. 25, p. 213.

Githens and Vanderkleed discuss the physiologic standardization of cardiac stimulants and present a standard for preparations of digitalis.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 919–920. See also Am. J. Pharm. 1910, v. 82, p. 462.

Hatcher and Brody outline a method for standardizing digitalis by the use of the cat and of ouabain for completing the reaction.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 929–939. See also Am. J. Pharm. 1910, v. 82, pp. 360–372.

Wood, H. C., Jr., recommends the guinea pig method for standardizing digitalis.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 941–942.

Hale, Worth, discussing the variability of digitalis, concludes that the first year leaves are not necessarily weaker than second year leaves; and that there is not necessarily any difference in the activity of wild and garden grown leaves; excessive drying is not essential in preventing deterioration of leaves. The assay of the crude drug does not insure a uniform finished product; great variability in the keeping qualities of preparations is to be noted, but the deterioration from age seems to be very slight if 70 per cent alcohol is used. He outlines a method of physiologic assay, based on that used by Famulener and Lyons.—*Ibid.* pp. 924–929. See also J. Am. M. Ass. 1910, v. 54, pp. 35–38, 129, and editorial p. 136.

Schmiedeberg, O., reports a study on the determination of the pharmacological value of dried leaves of *Digitalis purpurea.*—Arch. exper. Path. u. Pharmakol. 1910, v. 62, pp. 305–338.

See also comments.—Pharm. J. 1910, v. 31 (85), p. 412; N. York M. J. 1910, v. 91, p. 1123; Am. J. Pharm. 1910, v. 82, p. 482.

Caesar & Loretz (Jahres-Ber. 1910, p. 26) report a comparative study of digitalis gathered at different times and prepared in different ways.

Focke, C., discusses the advantages of his short time injection method for the physiological valuation of digitalis and strophanthus. Also reviews some of the recent articles appearing in foreign journals and outlines a proposed international standard for digitalis.—Arch. Pharm. 1910, v. 248, pp. 345–376. See also Ztschr. exper. Path. u. Therap. 1910, v. 8, pp. 97–102, and comments by Chevalier and others, Bull. sc. pharmacol. 1910, v. 17, pp. 132–139, 194–199, 707–717; J. Pharm. et chim. 1910, v. 1, p. 467. Also Nouv. remèdes, 1910, v. 26, pp. 121–133, 133–136.

Havenhill, L. D., outlines a modified formula for the tincture of digitalis.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 787.

Pollard, J. W., reports examining 10 samples of tincture of digitalis. The extractive varied from 1.08 to 3.45 per cent, and the percentage of alcohol from 21.6 to 40.0.—Proc. Massachusetts Pharm. Ass. 1910, p. 160.

Dohme and Engelhardt state that the Ph. Hung. III directs that tincture of digitalis should contain 3.5 per cent of extractive matter.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1193.

La Pierre, E. H., outlines a method for the preparation of fat free tincture of digitalis.—Apothecary, 1910, v. 22, No. 12, p. 18.

Hommell, Philemon P., thinks that the precipitate found in tincture of digitalis should be avoided.—Merck's Rep. 1910, v. 19, p. 122.

Thum, John K., thinks that experiments should be carried out along the line of extraction with stronger menstrua.—Am. J. Pharm. 1910, v. 82, p. 201.

An editorial (Bull. Am. Pharm. Ass. 1910, v. 5, p. 435) expresses the belief that the preparation of infusion of digitalis by dilution of a fluid extract is nothing short of criminal.

A news note (D.-A. Apoth. Ztg. 1910–11, v. 31, p. 156) points out that Hoger (Sdd. Apoth. Ztg.) recommends the addition of from 5 to 15 per cent of alcohol to infusion of digitalis as a preservative.

Bastedo, W. A., in a personal communication, says that the addition of ten per cent of alcohol to the infusion of digitalis in the U. S. P. formula, has established the belief among pharmacists that this is a sufficient preservative. As a consequence the infusion is often kept in stock for weeks or even months. Would it not be a good suggestion for the next pharmacopœia revision that alcohol be omitted from the formula, and that the direction be given that the infusion is to be freshly prepared when called for, as is done now with some preparations?

Osborne, Oliver T., questions the scientific accuracy of the general belief that the infusion of digitalis is more efficient as a diuretic than is any other form of this drug.—J. Am. M. Ass. 1910, v. 54, p. 377.

Perrot and Goris outline a method for making a permanent solution of the active principle of fresh digitalis for hypodermic injections.—Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), p. 138.

Brady, William, states that digitalis is very slowly absorbed and very slowly eliminated.—N. York M. J. 1910, v. 91, p. 211.

von Lhota, Kamill Lhoták, presents a study of chronic poisoning with digitoxin and digitalis, with protocols of experiments chiefly with dogs.—Arch. internat. pharmacodyn. et thérap. 1910, v. 20, pp. 369–392.

In a second paper he discusses habituation to digitoxin and digitalis.—*Ibid.* pp. 451–469.

von Leyden, Ernest, in a posthumous article, presents some observations on the use of digitalis.—Therap. d. Gegenw., Berl., 1910, v. 51, pp. 482–483.

Herzfeld, A., reviews the present status of digitalis therapy.—D.-A. Apoth. Ztg. 1910–11, v. 31, pp. 49–50; 63–64; 78. See also Merck's Arch. 1910, v. 12, pp. 171–175.

Schliomensun, B., reports observations on the affinity of the heart muscle for digitalis.—Arch. exper. Path. u. Pharmakol. 1910, v. 63, pp. 294–302.

Magnus and Sowton report a study on the elementary action of digitalis bodies.—*Ibid.* pp. 255–262.

For additional references on the chemistry, pharmacology and uses of digitalis see Zentrlbl. Biochem. u. Biophysik., Merck's Annual Report, J. Am. M. Ass., and Index Medicus.

ELASTICA.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 17) point out that caoutchouc according to the Ph. Germ. V is to be derived from various species of Hevea, particularly *Hevea brasiliensis*, one part to be soluble in 6 parts of petroleum benzin.

Dohme and Engelhardt outline the Ph. Hung. III test for the purity of caoutchouc.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1191.

An unsigned, illustrated article (Midl. Drug. 1909–1910, v. 43, pp. 692–694) discusses the production and manufacture of rubber.

Schidrowitz, Philip, reviews the India rubber industry and presents tables showing imports and exports of rubber in the United Kingdom. Also gives a table showing the approximate acreage under rubber in Ceylon.—J. Soc. Chem. Ind. 1910, v. 29, pp. 531–539.

Spence, D., discusses the cultivation and preparation of rubber.—Bull. Dept. Agric., Jamaica, 1910, v. 1, No. 3, pp. 205–212.

Pickles, Samuel Shrowder, discusses the constitution and synthesis of caoutchouc.—J. Chem. Soc., Lond., 1910, v. 97, pp. 1085–1090.

Berkhout, A. H., reports observations during a visit to the rubber producing countries.—Der Tropenpflanzer, 1910, v. 14, pp. 277–287, 348–357, 405–413, 459–467.

Ludewig, H. Juan, discusses the production of rubber in Mexico.—Oesterr. Chem.-Ztg. 1910, v. 14, pp. 510–521.

For additional references on the chemistry, cultivation, production and uses of rubber see Chem. Abstr., Cons. & Tr. Rep., Bull. Imp. Inst. and J. Agric. trop.

ELATERINUM.

Gane, E. H., asserts that commercial elaterin is a mixture of several principles and is a very variable article both chemically and physiologically. The drug possesses no therapeutic effects that cannot equally well or better be attained by the use of more definite products. It should be dismissed from the Pharmacopœia.—Drug Topics, 1910, v. 25, p. 228.

Berg, A., presents a note on the glucoside of *Ecballium elaterium*.—Bull. Soc. chim. France, 1910, v. 7, pp. 385–388. See also Compt. rend. Acad. sc. 1910, v. 150, pp. 981–983.

Butler, George F., asserts that the juice of elaterium when collected in July yields from 4 to 5 per cent of elaterin. That from the fruit gathered in August yields about 0.69 per cent; while the juice from the plant picked in September is almost, if not entirely, destitute of this principle.—N. York M. J. 1910, v. 92, p. 953.

ELIXIR ADJUVANS.

Eberle, E. G., suggests transferring elixir adjuvans to the N. F.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

Thum, John K., thinks it absurd to have practically the same formula in the National Formulary under the name, Elixir Glycyrrhizæ.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 253.

ELIXIR AROMATICUM.

Mulhan, Otto, suggests a revised method for making aromatic elixir. He dissolves the compound spirit of orange in a mixture of alcohol and water, filters, and adds the filtrate to the syrup and remaining alcohol.—Proc. Ohio Pharm. Ass. 1910, p. 65. Also Midl. Drug. 1910, v. 44, p. 530.

The members of the New England Branch of the A. Ph. A. think that the process for making aromatic elixir should be to triturate the oils with the absorbent powder and add to the mixture of alcohol and water, filtering and dissolving sugar in the filtrate.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 150.

Hartz and McElhenie state that there is no real need for so much as 25 per cent of alcohol in aromatic elixir.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1269.

Thome, E. R., asserts that the alcohol in aromatic elixir can safely be reduced to 200 cc. per 1000 cc. of elixir, thereby lowering the cost of the finished product.—Practical Druggist, 1910, v. 28, p. 122.

Gane, E. H., notes that the statement has been made that aromatic elixir is too strongly alcoholic and that the physician may in this way "unwittingly prescribe" a large amount of alcohol. This provokes an obvious comment upon the physician who "unwittingly" prescribes. It is hardly possible to appreciably reduce the alcoholic strength without sacrificing some of its flavoring value.—Drug Topics, 1910, v. 25, p. 228.

Lichthardt, G. H. P., thinks that the aromatic elixir of the Pharmacopœia should be tinted red. He has found quite a demand for a light colored and a red elixir.—Pacific Pharmacist, 1909–10, v. 4, p. 86.

ELIXIR FERRI, QUININÆ ET STRYCHNINÆ PHOSPHATUM.

Marquier, Adolph F., presents a formula for elixir of the phosphates of iron, quinine and strychnine containing practically double the quantity of soluble ferric phosphate and slightly less strychnine than the formula of the U. S. P. VIII.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1260.

Lichthardt, G. H. P., asserts that the elixir of the phosphates of iron, quinine and strychnine has proven very unsatisfactory with him. He finds that physicians prefer the older preparation of the previous N. F.—Pacific Pharmacist, 1909–10, v. 4, p. 86.

Eberle, E. G., suggests replacing the U. S. P. elixir of the phosphates of iron, quinine and strychnine by elixir iron, quinine and strychnine N. F. He doubts if the phosphates as such, in the U. S. P. preparation, have any medicinal advantage.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

Gane, E. H., asserts that the method of preparing elixir of the phosphates of iron, quinine and strychnine is too complicated and difficult for the retail store.—Drug Topics, 1910, v. 25, p. 228.

Ware, Chas. H., suggests that, in making the elixir of iron, quinine and strychnine phosphates, the alcoholic solution of the alkaloids be added to the phosphoric acid and the aromatic elixir and the mixture stand for twelve hours, before adding the solution of ammonium acetate.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1268.

Dunn, John A., suggests reducing the amount of ammonium acetate and modifying the U. S. P. directions accordingly.—*Ibid.* p. 1120.

Weinstein, Abraham, makes a number of suggestions for improving the formula.—*Ibid.* p. 1281.

Koch, William J., suggests that all elixirs containing strychnine be made of uniform strength.—Am. Druggist, 1910, v. 56, p. 239.

LaWall, Charles H., asserts that a method of quantitatively estimating strychnine in the presence of quinine is needed.—Am. J. Pharm. 1910, v. 82, p. 22.

Sayre, L. E., reports on 21 samples of iron, quinine and strychnine: 3 passed; 18 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097. See also Bull. Kansas Bd. Health, 1910, v. 6, p. 248, and Proc. Kansas Pharm. Ass. 1910, p. 58.

ELIXIRIA N. F.

Kebler, Lyman F., reports the endorsement of basic elixirs, and expresses the opinion that under no circumstances should they be colored artificially.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 147, 210.

The Baltimore Branch of the A. Ph. A. is reported as being in favor of the inclusion of basic elixirs in the next edition of the National Formulary.—*Ibid.* p. 17.

Lichthardt, G. H. P., believes there is use for the old "elixir simplex," or a simple orange elixir containing about 15 per cent of alcohol and no color.—Pacific Pharmacist, 1909–10, v. 4, p. 86.

Hommell, Philemon E., thinks that several new elixirs should be added to the list of the U. S. P.—Merck's Rep. 1910, v. 19, p. 123.

Blair, H. C., objects to the introduction of new basic elixirs of low alcoholic strength into the N. F., and points out that elixirs were originally suggested by palatable, sweet, aromatic alcoholic beverages. If alcohol is not desired syrups should be prescribed.—Proc. Pennsylvania Pharm. Ass. 1910, p. 252.

Needham, R. H., commends the proposed addition to the National Formulary of basic elixirs.—Proc. Texas Pharm. Ass. 1910, p. 69.

Eliel, Leo, asserts that the introduction of new basic elixirs of low alcoholic strength has been settled in the affirmative by the N. F. Revision Committee.—Proc. Pennsylvania Pharm. Ass. 1910, p. 363.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, p. 381) discusses the nature of elixirs, and points out that they are elegant preparations and care should be directed to the prime objects, palatability and appearance.

Jones, Simon N., in commenting on the lack of care exercised by retail druggists in making their elixirs, says he often wonders whether some of our druggists should not be made beneficiaries of the Rockefeller donation for the cure of hookworm disease.—Proc. Kentucky Pharm. Ass. 1910, p. 120.

Eberle, E. G., suggests a modified procedure for making elixirs.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

Beringer, George M., presents a number of formulas for elixirs proposed for recognition in the revision of the National Formulary.—Proc. New Jersey Pharm. Ass. 1910, pp. 64–68. Also Drug Topics, 1910, v. 25, pp. 291–292.

Bruder, O. E., thinks that elixirs are not used judiciously and that aromatic elixir appears all too frequently in the National Formulary formulas.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 30.

Thum, John K., thinks that the committee in charge of revising the N. F. did not always have an eye to the proper administration of medicines or to the patients' welfare, and calls attention to a number of formulas containing therapeutic incompatibilities.—*Ibid.* p. 253.

Flemer, Lewis, thinks that a general revision of elixirs is necessary. The use of fluid extracts in making them is objectionable and the dilution method should be replaced by extraction of powdered drugs by percolation.—*Ibid.* p. 14.

The members of the Denver Branch of the A. Ph. A. express themselves as being opposed to the use of fluid extracts in the making of elixirs when the fluid extracts are strongly alcoholic or when therapeutic value or elegance of the preparation is being sacrificed for simplicity of process.—*Ibid.* p. 95.

Dunning, H. A. B., points out that the elixirs recognized in the Ph. Fr. V do not resemble the American elixirs so much as they do wines. They vary greatly in alcoholic strength.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1154.

Diehl, C. Lewis, reports that the Committee on National Formulary approves of the lowering of the alcoholic strength of the saline elixirs, now in the N. F., providing there is no change in the flavor.—*Ibid.* p. 525.

ELIXIR BISMUTHI N. F.

Thum, John K., thinks that elixir of bismuth should be eliminated from the N. F.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 253.

ELIXIR CALCII LACTOPHOSPHATIS N. F.

Beringer, George M., presents a modified formula for elixir of calcium lactophosphate.—Proc. New Jersey Pharm. Ass. 1910, p. 64. Also Am. Druggist, 1910, v. 56, p. 387.

ELIXIR CINCHONÆ N. F.

The Ohio Valley Druggists' Association suggests omitting the compound tincture of cudbear from elixir of cinchona as it is objectionable when the preparation is used for making ferrated elixir of cinchona.—Proc. Ohio Pharm. Ass. 1910, p. 66.

It also presents the Academy of Pharmacy Formulary formula for compound elixir of cinchona and suggests that it be given a place in the N. F.—*Ibid.* p. 66.

ELIXIR DIGESTIVUM COMPOSITUM N. F.

Craig, Hugh, suggests the omission of diastase and pancreatin from compound digestive elixir, as these serve only to add to the cost of the preparation.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 228.

Weinstein, Abraham, thinks that the compound digestive elixir should contain more pancreatin and diastase, and no pepsin at all.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1279.

Dunn, Milton R., presents a formula for compound digestive elixir containing pepsin, rennin and diastase which he believes to be superior to the product yielded by the formula in the N. F.—Proc. Pennsylvania Pharm. Ass. 1910, p. 341.

Lichthardt, G. H. P., asserts that elixir pepsin compound has proven very unsatisfactory with him. The preparation contains too much glycerin; in fact, he thinks that this substance should be omitted altogether.—Pacific Pharmacist, 1909–10, v. 4, p. 86.

Huegel, Henry O. A., thinks the absence of uniformity of color the chief difficulty with the elixir digestive compound.—Proc. Missouri Pharm. Ass. 1910, p. 69.

The Ohio Valley Druggists' Association suggests that tincture of cudbear be replaced by an equivalent amount of cudbear.—Proc. Ohio Pharm. Ass. 1910, p. 66.

Blair, Henry C., reports a number of experiments with compound digestive elixir and expresses the belief that if this preparation is left out of our book there will be a great variation in the color and strength of the ingredients and much injury will be done both to ethical medicine and pharmacy.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1266–1267.

Thum, John K., thinks that despite the fact that compound digestive elixir has been termed a "therapeutic monstrosity" it is exceedingly popular among physicians as a vehicle for iodides and bromides, competing in that respect with essence of pepsin. He suggests that the name of the elixir be changed.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 253.

Eliel, Leo, thinks that compound digestive elixir N. F., is not inert. Aside from its large use as a vehicle, it is one of the most extensively prescribed preparations of the N. F. It acts as an anti-ferment and is largely used for this purpose.—Proc. Pennsylvania Pharm. Ass. 1910, p. 364.

ELIXIR OF FORMATES.

Beringer, George M., presents formulas for elixirs of formates.—Proc. New Jersey Pharm. Ass. 1910, p. 66. Also Am. Druggist, 1910, v. 56, p. 387.

ELIXIR GENTIANÆ N. F.

Hallberg, C. S. N., asks how can gentian be deprived of something it does not contain, since it contains no tannin how can it be detannated? He suggests that the elixir should be made from the extract of gentian and presents a formula.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 28.

Koch, William J., endorses the use of Hallberg's formula for elixir of gentian, which is as follows: extract of gentian, 10 gm.; boiling water, 50 cc.; aromatic elixir, enough to make 1,000 cc.—Am. Druggist, 1910, v. 56, p. 239.

ELIXIR GENTIANÆ GLYCERINATUM N. F.

Utech, P. Henry, presents what he believes to be the original formula for Gray's glycerin tonic compound.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1262–1263.

Hallberg, C. S. N., suggests the substitution of glycyrrhiza for saccharin and the reduction of the glycerin from 400 to 300 cc., in glycerinated elixir of gentian.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 28.

ELIXIR GLYCEROPHOSPHATUM N. F.

Beringer, George M., presents formulas for the elixirs of the glycerophosphates.—Am. Druggist, 1910, v. 56, p. 387. Also Proc. New Jersey Pharm. Ass. 1910, pp. 65–66.

Hommell, Philemon E., thinks that glycerophosphates have evidently come to stay and should receive official recognition in an eligible form.—Merck's Rep. 1910, v. 19, p. 123.

Carcano, L., criticises the Ph. Ital. III monograph on sodium glycerophosphate.—Boll. chim. farm. 1910, v. 49, p. 322.

ELIXIR PEPSINI N. F.

Thum, John K., asks why have an elixir of pepsin, essence of pepsin, liquid pepsin and aromatic liquid pepsin, and expresses the belief that the uselessness of these combinations of ferments as therapeutic agents has been proven.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 253.

Weinstein, Abraham, thinks that the elixir of pepsin ought to be discarded from the N. F. altogether and "essentia pepsini" which is the better preparation, be recommended only. There is absolutely no reason why an inferior preparation should be retained when a superior one is introduced. The physician wants the best preparation obtainable and does not care about the name.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1280.

Petit and Petit (Journ Pharm. et Chim. [7] I, 150–56. 16/2) report experimental studies of elixirs of pepsin and assert that observations extending over more than six years show that liquid preparations of pepsin do not deteriorate materially. They point out that preparations containing considerable amounts of alcohol must be liberally diluted before testing.—Chem. Zentralbl., Berl., 1910, v. 81, No. I, p. 1544.

ELIXIR PEPSINI, BISMUTHI ET STRYCHNINÆ N. F.

Sayre, L. E., reports on 39 samples of pepsin, bismuth and strychnine (elixir and similar products): 10 passed; 29 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.

ELIXIR POTASSII BROMIDI N. F.

Hallberg, C. S. N., thinks that elixir of potassium bromide should be red, and proposes the use of elixir rubrum.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 28. See also Clark, A. W.—*Ibid.* p. 167.

Havenhill, L. D., reports that 20 samples of elixir of potassium bromide were examined. 40 per cent were outside the permissible 10 per cent deviation.—Proc. Kansas Pharm. Ass. 1910, p. 58. Also Bull. Kansas Bd. Health, 1910, v. 6, p. 22 and Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.

ELIXIR TERPINI HYDRATIS N. F.

Hallberg, C. S. N., thinks that the vehicle for elixir of terpin hydrate should be alcohol and glycerin.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 28. See also Muhlhan, O. E.—*Ibid.* p. 149.

Thum, John K., reports that elixir of terpin hydrate has never given him any trouble but advises the elimination of solution of saccharin in the formula. Its presence is unnecessary and the preparation is sufficiently sweet without it.—*Ibid.* p. 253.

Burge, J. O., thinks that the addition of 12 per cent of water to elixir of terpin hydrate would prevent the precipitation of the sugar.—*Ibid.* p. 644.

Hérissey, H., criticises the elixir of terpene of the Ph. Fr. V and thinks the quantity should be reduced from 1.25 gm. to 1 gm. terpene to 100 gm. of the elixir.—J. pharm. et chim. 1910, v. 1, p. 386.

EMPLASTRA.

Kilmer, Frederick B., discusses the assay of medicinal plasters.—Am. J. Pharm. 1910, v. 82, pp. 112–118. Also J. Ind. & Eng. Chem. 1910, v. 2, pp. 94–97.

The same author discusses the manufacture of medicinal plasters and makes a number of suggestions regarding their improvement.—Am. J. Pharm. 1910, v. 82, pp. 416–428.

Hommell, Philemon E., thinks that the formulas for plasters should be revised, but none should be eliminated from the U. S. P., as they are all of value therapeutically and physicians would largely profit by giving them a more extended exhibition.—Merck's Rep. 1910, v. 19, p. 122.

Dohme and Engelhardt state that the Ph. Hung. III directs that plasters should be melted on a water-bath. Only resins which melt at a higher temperature are allowed to be melted over fire and are to be added to the balance of the plaster previously melted on a water-bath.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1177.

EMPLASTRUM ADHÆSIVUM.

Goldby, F., contributes a brief note on rubber adhesive plaster, with several formulas.—Pharm. J. 1910, v. 31 (85), p. 698.

Gane, E. H., asserts that as an attempt to imitate the rubber plaster of commerce the official adhesive plaster is a failure.—Drug Topics, 1910, v. 25, p. 228.

Cavaillès and Pépin suggest a simpler and more economical method for the preparation of the simple caoutchouc plaster of the Ph. Fr. V.—J. pharm. et chim. 1910, v. 1, p. 393.

EMPLASTRUM BELLADONNÆ.

Gane, E. H., asserts that belladonna plaster would be more uniform in composition and effective if made from the root extract. If the green color be a desideratum, this may readily be imparted by addition of chlorophyll.—Drug Topics, 1910, v. 25, p. 228.

The Committee of Reference in Pharmacy think it is desirable to substitute a plaster made with atropine sulphate for the present plaster made with extract of belladonna. It would have the advantages of being easier to make and of being free from objectionable color. (Compare Report, 1908, p. 25).—Brit. & Col. Drug. 1910, v. 58, p. 29.

EMPLASTRUM PLUMBI.

Dohme and Engelhardt outline the Ph. Hung. III process for making diachylon plaster.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1177.

Gane, E. H., reports that the official process for making lead plaster is satisfactory on a small scale and yields a whiter and more adhesive plaster than that obtained by the 1890 process. The plaster, however, does not keep well, becoming rancid and frequently discoloring badly, depending on the quality of soap used. The old process is preferable for use on the large scale.—Drug Topics, 1910, v. 25, p. 228.

The Pharmaceutical Journal (1910, v. 31 (85), p. 591) reports the death of a married woman, aged 23, from taking diachylon pills.

EMPLASTRUM SAPONIS.

Dohme and Engelhardt state that the Ph. Hung. III directs that soap plaster contain diachylon ointment as a base, and, in addition to this, white wax, camphor oil and 7 per cent of dried medicinal soap.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1177.

EMULSA.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, pp. 172–175) presents a definition for emulsions, discusses the theory involved and calls attention to some of the properties of the emulsions included in the Pharmacopœia.

Hemm, Francis, asserts that freshly made emulsions from fresh and prime oils are just as much superior to ready in stock old emulsions as a fresh egg is to a rotten one, or as fresh, sweet milk is ahead of sour clabber.—Proc. Missouri Pharm. Ass. 1910, p. 75.

Eberle, E. G., recommends that the emulsions be dropped. Their place is in the N. F.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

An unsigned article (Am. Druggist, 1910, v. 56. p. 359) describes and illustrates a rapid emulsifying machine.

EMULSUM OLEI MORRHUÆ.

Gane, E. H., asserts that the official formula for emulsion of cod liver oil is only suitable for extemporaneous use. It yields an excellent emulsion, but as is usually the case with acacia preparations, the emulsion will not keep any length of time, and stock emulsions must be made from a different formula.—Drug Topics, 1910, v. 25, p. 228.

Weinstein, Abraham, thinks that the emulsion of cod liver oil has been the cause of much trouble and to some loss of reputation and money.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1280–1281.

EMULSUM OLEI MORRHUÆ CUM HYPOPHOSPHITIBUS.

Gane, E. H., comments on the official formula for emulsion of cod liver oil with hypophosphites. The emulsion will not keep any length of time, and stock emulsions must be made from a different formula.—Drug Topics, 1910, v. 25, p. 228.

EMULSUM PETROLEI N. F.

Clark, A. W., recommends the deletion of petroleum emulsion from the National Formulary as it is not a satisfactory preparation and the medicinal value of petroleum at its best is very questionable.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 167.

Hommell, Philemon E., thinks that an emulsion of petroleum with hypophosphites should receive official recognition, as it is of value in tubercular cases when cod liver oil is not well borne by the stomach.—Merck's Rep. 1910, v. 19, p. 122.

EPINEPHRINE.

Hunt, Reid, reports that adrenalin hydrochloride is included in the Ph. Belg., Ph. Fr., Ph. Ital., and Ph. Mex.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

Vanderkleed, Charles E., points out that many workers, notably Abel, von Fürth, Aldrich and Takamine have each added something to perfecting a suitable method for isolating the active principle of the suprarenal gland.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 163.

Gehe & Co. (Handels-Bericht 1910, p. 130) report that the synthesis of suprarenin is now a practical accomplishment, and that *l*-suprarenin is equal in all respects to the natural product.

Tutin, Frank, makes a further contribution on syntheses in the epinephrine series.—Chem. & Drug. 1910, v. 77, p. 725. See also J. Chem. Soc., Lond., 1911, v. 97, pp. 2495–2524.

Mannich, C., reports studies on the composition and chemistry of adrenalin and related compounds.—Arch. Pharm. 1910, pp. 127–171. Also Arb. pharm. Inst. Univ. Berl. (1910), 1911, v. 8, pp. 155–192.

Ewins and Laidlaw are of the opinion that there is as yet no evidence of the formation of adrenine by ferment activity, from tyrosine or the more closely related bases parahydroxyphenylethylamine and dihydroxyphenylethylmethylamine.—J. Physiol. Lond. 1910, v. 40, pp. 275–278.

Lüders, Richard, reviews the chemistry of some of the adrenalin like preparations now on the market.—Chem. Ind. 1910, v. 33, pp. 212–213.

Macadie, W., discusses the coloration of solution of natural adrenine, with some comments on preservatives.—Pharm. J. 1910, v. 31 (85), p. 660.

Ewins, A. J., describes some color reactions of adrenine and allied bases.—J. Physiol. Lond. 1910, v. 40, pp. 317–326.

Rosenthaler and Görner, in a review of the use of aromatic nitroderivatives as precipitants, report that tetranitrophenolphthalein and hexanitrophenylamine precipitates adrenalin. With the latter reagent the precipitate separates out in the form of micro-crystals.—Ztschr. analyt. Chem. 1910, v. 49, p. 343.

Schultz, W. H., reports quantitative pharmacological studies on the relative physiological activity of some commercial solutions of epinephrine and presents a table showing the comparative activity of a number of commercial samples.—Bull. No. 61, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 30.

An editorial (Lancet 1910, v. 178, p. 1083) calls attention to the recent work of W. H. Schultz, Bull. 61, Hyg. Lab. on the comparative strengths of some commercial solutions of epinephrine.

Bayer, Gustav, outlines methods for increasing the sensitiveness of adrenalin and brenzcatechin reactions.—Biochem. Ztschr. 1909, v. 20, pp. 178–188.

Jacobsohn, Leo, discusses the applicability of suprarenal preparations in medical practice.—Therap. Gegenw., Berl., 1910, v. 51, pp. 446–456.

Trendelenburg, Paul, discusses the determination of the adrenalin content of normal blood and the determination of the reduced action of adrenalin by a physiological method of measuring.—Arch. exper. Path. u. Pharmakol. 1910, v. 63, pp. 161–176.

Pollak, Leo, discusses the possible habituation effect of adrenalin on the organism.—Ztschr. physiol. Chem. 1910, v. 68, pp. 69–74.

Wood, H. C., Jr., asserts that the addition of adrenalin not only prolongs the action but enhances the power of the anæsthetics of the cocaine series.—J. Am. M. Ass. 1910, v. 55, p. 31.

Wiggers, Carl J., reports observations on the comparative value of vasomotor drugs in renal hæmorrhages.—Arch. Int. Med. 1910, v. 5, pp. 348–360. See also J. Pharmacol. & Exper. Therap. 1910–11, v. 2, p. 395.

Strickler and Fleisher contribute a note on the influence of intravenous injections of sparteine and adrenalin on the heart of the dog.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, pp. 55–57.

Hall, J. N., presents notes of a case of asthma, in which epinephrine was successfully used through a long period.—J. Am. M. Ass. 1910, v. 55, p. 128.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 75–77) reviews the literature of 1910 relating to the use and physiological action of adrenalin.

A number of references to the chemistry, pharmacology and physiology of epinephrine will be found under the generic title adrenalin in Chem. Zentralbl. and in Zentrlbl. Biochem. u. Biophysik. 1910, v. 10.

Additional references on the chemistry, pharmacology and uses of epinephrine will be found in the Chem. Abstr., J. Am. M. Ass. and Index Medicus under the several trade names.

ERGOTA.

Bartlett, H. H., thinks that "Secale cornutum" is to be preferred to "Ergota," as the latter has no status as good Latin.—J. Am. M. Ass. 1910, v. 54, p. 396. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 87.

Sharp, Gordon, contributes a short historical study of ergot.—Pharm. J. 1910, v. 31 (85), pp. 38–39; 68–69.

An editorial (Chem. & Drug. 1910, v. 77, p. 863) discusses the position of ergot, with a comparison of the monthly quotations for

Russian and Spanish spot in each month during the year. The United States, the largest consumer, imported 135,740 lb., during the year ending June 30, 1909. The average annual import during the past 5 years has been 120,000 lb.

Schneider, Albert, thinks that ergot is a very important drug and should be clearly defined as to quality and purity requirements. He enumerates the microscopical characteristics and notes that the powder deteriorates very rapidly and is subject to the attack of yeast cells, mites, and other drug parasites.—Merck's Rep. 1910, v. 19, p. 191.

An editorial (Drug Topics, 1910, v. 25, p. 97) states that ergot will keep better if well dried and stored in a dry place. The absence of moisture stops enzyme activity, which in time destroys the active principles.

Dohme and Englehardt state that the Ph. Hung. III directs that ergot should yield 16 per cent of extractive matter when exhausted with alcohol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1191.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 53) point out that the Ph. Germ. V requires that ergot be at least 35 cm. long, be not kept more than 1 year and not kept on hand in the powdered form. They express the belief that an assay for cornutin would have been a desirable addition.

Steinhorst, H., comments on the Ph. Germ. requirement for extract of ergot, and calls attention to the desirability of modifying the requirement that extract of ergot make a clear solution with water.—Apoth. Ztg. 1910, v. 25, p. 380.

LaWall and Bradshaw report finding from 2.46 to 2.7 per cent ash in ergot of rye.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Dale, H. H., presents a brief note on the active principles of ergot.—Brit. M. J. 1910, v. 2, p. 1610.

Wenzell, W. T., describes ergoxanthein, a new active principle found in ergot, and gives a brief historical summary of the discovery of the alkaloids of ergot.—Am. J. Pharm. 1910, v. 82, pp. 410–416.

Barger and Ewins present some additional observations on the chemistry of the alkaloids of ergot and the relation of ergotoxine to ergotinine.—J. Chem. Soc., Lond., 1910, v. 97, pp. 284–292.

Kutscher, Fr., reports observations on the physiological action of an ergot base and of imidazolylethylamine.—Zentrlbl. Physiol. 1910–11, v. 24, pp. 163–165.

Engeland and Kutscher report on a second active ergot base.—*Ibid.* pp. 479–480. See also *Ibid.* pp. 589–591.

Barger and Dale present a note on a third active principle in ergot extracts.—Pharm. J. 1910, v. 30 (84), p. 757. Also J. Physiol. Lond. 1910, v. 40, p. xxxviii and Zentrlbl. Physiol. 1910–11, v. 24, pp. 885–889.

Rosenthaler, L., points out that ergot contains an emulsin-like enzyme and describes a method for detecting the same.—Apoth. Ztg. 1910, v. 25, p. 5.

Berger, reviews several recently published papers on enzymes in ergot.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 141–142.

Caesar & Loretz (Jahres-Ber. 1910, pp. 110–111) outline the Keller-Fromme method for the qualitative and quantitative estimation of cornutin in ergot and also call attention to the ash limitations for this drug included in several pharmacopœias.

Thome, E. R., asserts that cornutin is generally conceded to be a constituent that determines the quality of ergot. He asks if so proved why not admit an assay process which is simple; 0.2 per cent cornutin is generally accepted as the average.—Practical Druggist. 1910, v. 28, p. 122.

Gane, E. H., asserts that an assay process for ergot would be most valuable, but in the present state of our knowledge it seems impossible to devise a satisfactory method. The directions to store in a dry place are most important and it should always be borne in mind that old ergot is not ergot at all, but an inert substance.—Bull Am. Pharm. Ass. 1910, v. 25, p. 228.

Edmunds and Hale from an examination of two series of fluid extracts of ergot by chemical and physiological methods of assay find a very close agreement between the results obtained on the cock's comb with those on the uterus. The blood pressure estimations present some glaring discrepancies which would seem to contraindicate the adoption of this method of assay. The estimation of cornutin by Keller's method also showed discrepancies.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, p. 393.

Wood, H. C., Jr., in a report on the physiological assay of drugs, discusses the several methods proposed for the standardization of ergot and points out that the necessity of taking the average of a series of observations makes the assay so expensive and tedious as practically to preclude its use by any but the largest manufacturers.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 940.

Rippetoe, John R., discusses the chemical assay of fluid extract of ergot and reports his results with Wood's benzol-extract method.—Am. J. Pharm. 1910, v. 82, pp. 119–120.

Kazay, Andreas, reviews the active constituents of preparations of ergot and their determination.—Ztschr. allg. österr. Apoth.-Ver., 1910, v. 48, pp. 547–548.

Vanderkleed, Chas. E., reports 15 assays of ergot; lowest, 0.147, highest, 0.260 per cent cornutine of Keller; 14 above and 1 below standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Engelhardt, Hermann, reports that the quality of ergot examined during the year was very good. Only 9 out of 34 samples showed a deficiency in chemical and physiological strength.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1257.

Caesar & Loretz (Jahres-Ber. 1910, p. 52) report the better qualities of ergot as assaying from 0.160 to 0.236 per cent of cornutin. Inferior ergot was found to contain from 0.015 to 0.066 per cent of cornutin. They outline a method for determining the cornutin content of ergot and call attention to some of the difficulties frequently met with and the methods of overcoming them.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 10) report that 12 samples of ergot assayed for amount of matter soluble in cold water, have given figures ranging from 13.10 to 17.28 per cent, the average being 14.5 per cent, a result far below that reported last year.

Dohme and Engelhardt outline the Ph. Hung. III methods of making extract and fluid extract of ergot.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1183.

Franklin, J. H., reports observations on an improved method of making liquid extract of ergot.—Year-Book of Pharmacy, 1910, pp. 430–434. Also Pharm. J. 1910, v. 31 (85), p. 279. For discussion see p. 177.

Wood, H. C., jr., discusses the rate of deterioration of fluid extract of ergot and concludes that under most favorable conditions fluid extract of ergot loses in the first year after its manufacture between 45 and 50 per cent of its physiological power.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 883–886.

Beal, George D., quotes from the last report of the Ohio Dairy and Food Department, 2 samples of fluid extract of ergot examined, both failed.—Proc. Ohio Pharm. Ass. 1910, p. 73.

Watson, George Y., thinks there should be a more stringent law against selling the concentrated preparations of ergot, cottonroot, savine and tansy, except to physicians or on their prescriptions, as these substances are capable of producing much harm in the hands of the ignorant.—Proc. North Carolina Pharm. Ass. 1910, p. 21.

Brady, William, states that ergot, given by the mouth, is absorbed and acts in 15 minutes, but the effect continues only half an hour, so that semi-hourly doses are required in serious cases.—N. York M. J. 1910, v. 91, p. 211.

Birt, J., reports a case in which large doses of ergot, taken regularly for several years for uterine fibromata and hæmorrhage, seem to have induced loss of the patellar reflex.—Lancet, 1910, v. 179, p. 1580.

Wood and Hofer present an experimental study of the pharmacology of ergot.—Arch. Int. Med. 1910, v. 6, pp. 388–419.

The editor of the Therapeutics Column (J. Am. M. Ass. 1910, v. 55, p. 2064) comments favorably on the report of Wood and Hofer on ergot.

Livingston, Alfred T., outlines the peculiar province of ergot.—Med. Rec. 1910, v. 77, pp. 182–184. Also N. York M. J. 1910, v. 92, pp. 17–20.

Barton, Wilfred M., asserts that as a hæmostatic ergot is, to say the least, uncertain.—J. Am. M. Ass. 1910, v. 55, p. 286.

Ransom, S. Walter, is reported as stating that ergot has proved to be a drug of value in delirium tremens.—Critic and Guide, 1910, v. 13, p. 141.

Adams, F. X., points out that the indications for ergot are: flushed face, but not as flushed as gelsemium nor as dusky as the belladonna face. The pupil of the eye is moderately contracted, and is not influenced by adjusting to different distances.—Eclectic M. J. 1910, v. 70, p. 73.

For additional references on the chemistry, pharmacology and uses of ergot see Chem. Abstr., Zentrlbl. Biochem. u. Biophysik, and Index Medicus.

ERIODICTYON.

Gane, E. H., thinks that the synonym yerba santa should be added to the description of eriodictyon.—Drug Topics, 1910, v. 25, p. 228.

Schneider, Albert, enumerates the microscopical characteristics of eriodictyon, and asks regarding the permissibility of the presence of fruits.—Merck's Rep. 1910, v. 19, p. 191.

Kebler, L. F., points out that the Pharmacopœia, in describing yerba santa, selects virtually a typical or normal leaf. It says nothing about worthless leaves, the presence of twigs or stems or accidental material.—Proc. Maryland Pharm. Ass. 1910, p. 117.

Tutin, Frank, reports observations on the constitution of eriodictyol, of homoeriodictyol, and of hesperitin.—J. Chem. Soc., Lond., 1910, v. 97, pp. 2054–2062.

Hommell, Philemon E., thinks that the aromatic syrup of eriodictyon N. F., should have been in the U. S. P. instead of the N. F. as then it would have received more attention.—Merck's Rep. 1910, v. 19, p. 122.

ESSENTIA PEPSINI N. F.

Ware, Chas. A., presents a formula for essence of pepsin which he believes to be more satisfactory than the N. F. preparation.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1267–1269.

Wetterstroem, Theodore D., presents a formula for essence of pepsin in which fresh calf's rennet is directed to be used in place of rennin.—Midl. Drug. 1910, v. 44, pp. 433–434.

Thum, John K., recommends the use of purified kaolin in place of purified talcum as a filtering medium for essence of pepsin.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 254.

White, W. R., suggests the use of Sauterne wine in essence of pepsin, N. F.—*Ibid.* p. 643.

Hallberg, C. S. N., thinks that the cause of trouble with essence of pepsin is the poor quality of the wine, mostly used.—*Ibid.* p. 28.

Wetterstroem, Theo. D., reports on 9 samples of essence of pepsin: specific gravity at 15.6°, from 1.033 to 1.073; alcohol, from 6.78 to 18.25 per cent; residue 100 cc., 19.7 to 32. gm; with proteolytic power varying from 1: 1800 to 1: 4000.—Proc. Ohio Pharm. Ass. 1910, pp. 67–68. See also Drug. Circ. 1910, v. 54, pp. 457–458.

Sayre, L. E., reports the examination of 12 samples of essence of pepsin, only 3 of them complying approximately with the requirements.—Bull. Kansas Bd. Health, 1910, v. 6, p. 21.

EUCALYPTOL.

Schimmel & Co. (Semi-Annual Report, April, 1910, p. 130) review the Ph. Ital. III requirements for eucalyptol.

Gane, E. H., asserts that eucalyptol occasionally contains some unremoved oil. A good sample should contain 97 to 98 per cent of eucalyptol.—Drug Topics, 1910, v. 25, p. 228.

Eldred, Frank R., asserts that there is no difficulty in obtaining eucalyptol optically inactive, melting between 1° and 2°, and having a specific gravity at 15° of 0.926 to 0.930. In examining twenty-six lots three were found to be optically active from −1° to +2.40°, 1 lot melted at −2°, 1 at −0.5°, and two at 0°. The melting point should certainly not be lower than 0°, and probably 1° to 2° would be a satisfactory requirement.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 892.

Schimmel & Co. (Semi-Annual Report, October, 1910, p. 66) think it would be well to forward the prescribing of eucalyptol in lieu of oil of eucalyptus because the purity of eucalyptol can be most accurately tested, while the innumerable varieties of eucalyptus oils on the market naturally render the examination of the oil much more difficult.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 32) report that recent work indicates that although cucalyptol may be the more valuable expectorant, phellandrene and oils containing it possess the greatest antiseptic power, although, if this is present above a certain limit, such oils produce an undue amount of throat irritation.

EUCALYPTUS.

Binz, E. G., comments on the commercial growing of eucalyptus for oil.—Pacific Pharmacist, 1909–10, v. 4, pp. 114–116. Also Proc. Am. Pharm. Ass. 1910, v. 58, pp. 602–604.

Cayla, V., comments on Norman D. Ingham's bulletin (No. 196, Agric. Exper. Sta., Berkeley) on the cultivation of eucalyptus in California.—J. Agric. trop. 1910, v. 10, p. 91.

Schimmel & Co. (Semi-Annual Report, October, 1910, p. 66) call attention to the first part of the second volume of "A critical Revision of the Genus Eucalyptus," edited by J. H. Maiden.

Schneider, Albert, calls attention to the structural characteristics of eucalyptus and states that this drug is rarely adulterated.—Merck's Rep. 1910, v. 19, p. 191.

LaWall and Bradshaw report finding 6.3 per cent ash in eucalyptus leaves.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Webster discusses the use of eucalyptus leaves in asthma, reports several cases, and suggests that this agent might bear a little investigation.—Eclectic M. J. 1910, v. 70, pp. 378–380.

Schamelhout, A., notes two cases of poisoning by eucalyptus have recently been reported.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 184.

Gane, W. H., asserts that the activity of eucalyptus being due to the oil, there does not seem any necessity for retaining the leaves in the Pharmacopœia, especially as preparations of them are very little used.—Drug Topics, 1910, v. 25, p. 228.

Osborne, Oliver T., thinks that eucalyptus and its fluid extract should be deleted; the oil and eucalyptol will suffice.—J. Am. M. Ass. 1910, v. 54, p. 209.

EUGENOL.

Hill and Umney think it well to retain the oils of cloves and pimenta, and not to include eugenol.—Pharm. J. 1910, v. 30 (84), p. 178. Also Chem. & Drug. 1910, v. 76, p. 271.

Jeancard and Satie state that eugenol is soluble in 1 part of 70 per cent alcohol, 1.5 parts of 65 per cent alcohol and 2 parts of 60 per cent alcohol.—Am. Druggist, 1910, v. 56, p. 41.

EUONYMUS.

Schneider, Albert, calls attention to the microscopical characteristics of euonymus and the differentiation between stem and root bark.—Merck's Rep. 1910, v. 19, p. 191.

LaWall and Bradshaw report finding 11.1 per cent ash in euonymus bark.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Osborne, Oliver T., asserts that euonymus, with its extract and fluid extract, could well be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 291.

EUPATORIUM.

Rusby, H. H., thinks that the portion of stem permissible in eupatorium should be specified as not exceeding 6 inches in length.—Drug. Circ. 1910, v. 54, p. 617.

LaWall and Bradshaw report finding 7.5 per cent ash in eupatorium herb.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Gane, E. H., asserts that eupatorium is practically obsolete so far as medical practice is concerned, though still popular with the laity in certain sections. This hardly warrants its inclusion in the Pharmacopœia.—Drug Topics, 1910, v. 25, p. 228.

EXTRACTA.

Kraemer, Henry, points out that the Ph. Ndl. contains 3 classes of extracts of vegetable drugs: dry extracts or siccum (extracta sicca), which contain not more than 6 per cent of moisture; solid extracts, or extracta spissa, which contain not more than 20 per cent of water, and liquid extracts.—Am. J. Pharm. 1910, v. 82, p. 525.

Dohme and Engelhardt state that the Ph. Hung. III distinguishes dry, thick, semi-liquid and liquid extracts.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1177–1178.

Thome, E. R., thinks that both forms of each extract should be recognized. A standard for non-assayable extracts is desirable, i. e., their relation to the drug. He suggests a modification of the present method of assay.—Practical Druggist, 1910, v. 28, p. 122.

Hommell, Philemon E., thinks that the list of powdered extracts should be extended by the introduction of those of aconite, senna, belladonna, hyoscyamus, digitalis, aloes, rhubarb and colchicum corm.—Merck's Rep., 1910, v. 19, p. 122.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, pp. 511–513, 554–555) discusses the method of making and the nature of some of the official extracts.

The Kings County Pharmaceutical Society recommends that more powdered extracts be recognized.—Drug. Circ. 1910, v. 54, p. 254.

Kroeber, Ludwig, discusses the production of extracts under pressure.—Pharm. Zentralh. 1910, v. 51, pp. 41–47.

See also Bruns, W.—*Ibid.* pp. 150–153; Kroeber, Ludwig.—pp. 153–154; and Herzog, J.—pp. 83–85. Also article by Dieterrich, pp. 85–86.

Herzog and Fosse review the efficiency of several methods for extracting drugs and report the results obtained by them.—Ber. Pharm. Gesellsch. 1910, v. 20, pp. 330–350.

Dulière, W., points out some of the difficulties of the chemical control of extracts and discusses the desirability of having preparations of this type made by the pharmacist in his own laboratory.—Comt. rend. Congr. Internat. Pharm., 1910 (Brussels, 1911), p. 49.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, pp. 34–35) present a table showing the proposed standards for extracts included in the Ph. Brit.

Anselmino states that the provision of the Brussels Conference that the extracts of potent drugs should contain 10 per cent of water was not adopted by the Ph. Germ. V as it had been found that these extracts contained at least 15 per cent of moisture.—Chem. & Drug. 1910, v. 77, p. 892.

Perrot and Goris discussed at the International Congress of Pharmacy, Brussels, a new method of sterilization of plants and their extractive products. An outline is given in Chem. & Drug. 1910, v. 77, p. 405.

Osborne, Oliver T., asserts that the extract of any bitter tonic, for internal administration, defeats the object for which it is administered, as unless the pill or capsule is dissolved in the mouth, the bitter taste is lost, and in the stomach it is inactive. This would render the extract of gentian unnecessary in the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 209.

EXTRACT OF BEEF.

Cook, F. C., reports a comparison of beef and yeast extracts of known origin. He describes the samples examined and outlines methods of analysis.—Circ. No. 62, Bur. Chem., U. S. Dept. Agric., 1910, p. 7.

Pearson, W. A., reports that several samples of extract of beef were tested for the presence of nitrates by igniting and testing the residue with alpha-amido-naphthalene acetate. One sample showed a marked pink color, indicative of considerable nitrates in the original; with the others a faint pink was obtained.—Proc. Pennsylvania Pharm. Ass. 1910, p. 137.

Thompson, W. H., contributes a note on the nutritive value of beef extract, giving the results of some of his experiments upon dogs.—Pharm. J. 1910, v. 31 (85) p. 548.

EXTRACTUM FERRI POMATUM N. F.

van Itallie, E. I., reports a number of observations on solution of iron malate, the methods of making the preparation and the average content of iron.—Pharm. Weekblad, 1910, v. 47, pp. 369–372.

EXTRACTUM GLYCYRRHIZÆ.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 57) point out that the Ph. Germ. V requires that commercial extract of licorice yield not less than 5 per cent and not more than 11 per cent of ash.

It also requires that purified extract of licorice lose not more than 30 per cent of moisture on drying at 100° and yield not more than 11 per cent of ash.

FEL BOVIS.

Hemm, Francis, states that oxgall is still widely popular and is prescribed much in pill or capsule form, usually in combination with other hepatics and cathartics. A demand for its retention in the U. S. P. IX will no doubt be made.—Proc. Missouri Pharm. Ass., 1910, p. 99.

Mittelbach, William, thinks that oxgall ought to mean the purified article.—*Ibid.* p. 98.

Glaessner and Singer (Wien. klin. Wchnschr. 1910, 1, 5) discuss the use of cholic acids as cathartics.—Pharm. Zentralh. 1910, v. 51, pp. 197–198.

FERRI CARBONAS SACCHARATUS.

Gane, E. H., asserts that saccharated ferrous carbonate can be materially improved so as to contain not less than 30 per cent of ferrous carbonate in place of 15 per cent now required. If glucose be added to the precipitating bath, and the precipitate dried down with glucose in place of sugar, a vastly superior product is obtained.—Drug Topics, 1910, v. 25, p. 229.

The Committee of Reference in Pharmacy believes that the process recommended by Franklin for making saccharated ferrous carbonate yields a product containing more ferrous carbonate, and keeps better, than the official preparation. It submits a modified monograph with tests to be embodied in the Ph. Brit.—Brit. & Col. Drug. 1910, v. 58, pp. 12–13.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 37) report that manufacturers seem to be anticipating the improved official saccharated iron carbonate to some extent, one sample recently offered containing 42 per cent of ferrous carbonate.

''Country Chemist'' (Pharm. J., 1910, v. 30 (84), p. 287) asks what is carbonate of iron and says that he always gives Ferri Carb. Sacch. An editorial (p. 290) says that Ferri Oxid. Præcip. Rubr. is known as Ferri Carb., Ferri Carb. Solubile, Ferri Subcarb., etc., and this view is adopted in the B. P. C. supplement, published in The Chemists Annual, 1909. A number of correspondents (p. 318) seem to take the same view; but Fraser (p. 354) can not understand why there should be any doubt about it and thinks no chemist would be justified in supplying anything but Ferri Carb. Sacch. B. P.

FERRI CHLORIDUM.

Gane, E. H., asserts that ferric chloride is not required in the Pharmacopœia, as it is only prescribed in the form of the solution or tincture.—Drug Topics, 1910, v. 25, p. 229.

Dohme and Engelhardt outline the Ph. Hung. III test for ferrous salt.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1184.

Hemm, Francis, presents a formula for solution of ferric chloride for inclusion in the U.S.P.—Proc. Missouri Pharm. Ass. 1910, p. 77.

Tingle, Alfred, reports experiments to determine the action of coke on solutions of ferric chloride.—J. Am. Chem. Soc., 1910, v. 32, pp. 540–541.

Joseph, A. F., presents a note on the estimation of iron in ferric solution.—J. Soc. Chem. Ind. 1910, v. 29, p. 187.

Havenhill, L. D., outlines a modified formula for making the tincture of ferric chloride, and suggests that this preparation should assay by the official process 13.30 gm. of anhydrous ferric chloride in each 100 cc.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 787.

Bachman, G., reports that two samples of tincture of ferric chloride examined were found to contain 3.92 per cent and 4.38 per cent of metallic iron.—Proc. Minnesota Pharm. Ass. 1910, p. 64. See also Northwestern Druggist, 1910, v. 11, Sept., p. 25.

Brown, Lucius P., reports examination of 12 samples of tincture of iron; 5 or 41.67 per cent of which were found to be illegal.—Bull. No. 3, Tennessee Food & Drugs Insp. 1910, p. 30.

Hudson, T. G., reports the examination of 117 samples of tincture of ferric chloride. Of this number only 21 came within 5 per cent of the U. S. P. strength. The variation found being from 43 to 151.91 per cent of U. S. P. strength.—Bull. Georgia Dept. Agric. 1910, No. 51, pp. 132–136.

Clayton, Charles, suggests the use of 5 per cent of glycerin in tincture of ferric chloride.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 375.

Robinson, William J., states that the principal incompatibles of tincture of ferric chloride and of ferric salts generally are: Salicylates (formation of deep violet-blue color and precipitate of ferric salicylate); benzoates (flesh colored precipitate of ferric benzoate); tannates, inky color and precipitate of ferric tannate); antipyrine (red color); the iodides and bromides (liberation of iodine and bromine); mucilage of acacia (gelatinous precipitate, unless well diluted); carbonates and bicarbonates (precipitation of ferric carbonate and oxide).—Critic and Guide, 1910, v. 13, p. 135.

FERRI ET QUININÆ CITRAS.

Dohme and Engelhardt outline the Ph. Hung. III requirements for and method of making iron and quinine citrate.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1175.

Gane, E. H., thinks that iron and quinine citrate should be deleted from the Pharmacopœia, as the presence of 2 salts of the same composition but different color cannot but cause confusion both to prescriber and dispenser. The soluble green salt alone should be recognized.—Drug Topics, 1910, v. 25, p. 229.

FERRI HYDROXIDUM CUM MAGNESII OXIDO.

Barton, Wilfred M., asserts that animal experimentation has killed his confidence in iron hydroxide in the treatment of arsenic poisoning.—J. Am. M. Ass. 1910, v. 55, p. 287.

Gane, E. H., asks why not, if an arsenic antidote is recognized officially, give antidotes for other poisons many of which are more frequent sources of trouble than arsenic.—Drug Topics, 1910, v. 25, p. 229.

FERRI HYPOPHOSPHIS.

Dunn, John A., discusses the test for foreign heavy metals in ferric hypophosphite and suggests that nitric acid be used instead of hydrochloric acid.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1119.

FERRI SULPHAS.

The Committee of Reference in Pharmacy thinks that in connection with ferrous sulphate, the words "or as a crystalline powder" should be inserted after "prisms" so as to include the granulated salt.—Brit. & Col. Drug. 1910, v. 58, p. 13.

Bachman, G., reports that the ferrous sulphate examined showed a minimum percentage of 95.45, a maximum of 99.2.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 28) find it impossible to obtain the official requirement of 99.4 per cent $FeSO_4,7H_2O$ in the crystal form, the amount present rarely exceeding 96 per cent in samples of excellent color.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 38) report that some of the finest specimens of iron sulphate examined attained a purity as high as 99.9 per cent.

FERRI SULPHAS EXSICCATUS.

Oldberg, Oscar, thinks that one of the needlessly long adjectives is "exiccatus," which should be shortened to siccatus, or even to siccus. He thinks that every useless letter should be eliminated from our official titles.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 760.

The Committee of Reference in Pharmacy thinks that the process for making exsiccated ferrous sulphate should be omitted from the Ph. Brit.—Brit. & Col. Drug. 1910, v. 58, p. 13.

LaWall, Charles H., asserts that a purity rubric for dried ferrous sulphate should state the amount of allowable moisture, and a method for its estimation should be given.—Am. J. Pharm. 1910, v. 82, p. 22.

Gane, E. H., thinks that a limit should be set to the amount of water-insoluble salt, and to the amount of moisture permissible. An assay process, titration with permanganate, might also be given, also a definite percentage of dried ferrous sulphate. Drug Topics, 1910, v. 25, p. 229.

FERRUM.

Gane, E. H., asks why omit tests for all impurities in metallic iron. It usually contains arsenic and a limit should be set as well as a definite per cent of pure iron provided for.—Drug Topics, 1910, v. 25, p. 229.

Dohme and Engelhardt state that the Ph. Hung. III directs that iron should contain not more than 1 per cent of matter insoluble in hydrochloric acid.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1184.

Riedel's Berichte (1910, p. xxviii) suggests a modification of the Ph. Germ. IV requirement for powdered iron. The gas resulting from dissolving 0.1 gm. in 5 cc. of diluted hydrochloric acid should not produce a brownish discoloration with lead acetate paper and the resulting solution after oxidation with nitric acid and after precipitation of the oxide by excess of ammonia should yield a colorless filtrate.

Harbert, J. P., states that iron in some form is indicated in eye disease which are dependent upon or associated with anæmic conditions of the system. Scrofulous and tubercular eye affections often call for iron.—Eclectic M. J. 1910, v. 70, p. 192.

Osborne, Oliver T., thinks it unnecessary to offer 31 different preparations of iron in the Pharmacopœia, not to mention the number included in the National Formulary. He gives a list of those that he thinks are needed.—J. Am. M. Ass. 1910, v. 54, p. 469.

Whelpley, Henry M., thinks that we should reduce the number of salts of such medicinal elements as iron.—Western Druggist, 1910, v. 32, p. 17.

FERRUM REDUCTUM.

The Committee of Reference in Pharmacy thinks that reduced iron should be required to contain not less than 80 per cent of metallic iron and not more than 200 parts per million of arsenic.—Brit. & Col. Drug. 1910, v. 58, p. 13.

Rippetoe, John R., thinks that the assay process for reduced iron is not satisfactory since it is inclined to give low results, owing to the iodine not completely dissolving or acting upon all of the iron.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1061.

Dohme and Engelhardt state that the Ph. Hung. III directs that reduced iron dissolved in hydrochloric acid should leave not more than 1 per cent of insoluble matter.—*Ibid.* pp. 1183–1184.

Brown, Linwood A., points out that owing to the finely divided state of reduced iron, it is very prone to oxidation, and hence should be kept in tightly stoppered bottles, in order to preserve the required strength of metallic iron.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 139.

Scoville, W. L., reports that all lots of reduced iron assayed from 90 per cent to 97 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 744.

Tayntor, L. O., reports that 11 samples of reduced iron assayed over 90 per cent, 7 contained sulphide, all were free from arsenic.—*Ibid.* p. 744.

Sayre, L. E., reports on 8 samples of iron by hydrogen: 3 passed; 5 illegal.—*Ibid.* p. 1097.

Leubner, Bernard O., discusses the nature and composition of reduced iron and reports an examination of 18 samples. He found that a majority of the samples contained sulphide in excess, and by far the greater number contained appreciable quantities of arsenic. Merck's Rep. 1910, v. 19, pp. 164–165.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 28) report that their experience shows reduced iron to be of very satisfactory quality.

FICUS.

Tunmann, O., comments on the importation of figs into the port of Hamburg, and presents a diagram graphically portraying the fluctuation in the amount of this drug imported.—Apoth. Ztg. 1910, v. 25, p. 311.

Paladino, Raffaele, reports a study of the chemical composition of the fig (*Ficus carica*).—Biochem. Ztschr. 1910, v. 24, pp. 263–265.

Wiley, H. W., reports that a large number of shipments of figs were found to be so badly infested with worms and worm excreta as to necessitate their reshipment.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

FLUIDEXTRACTA.

Bartlett, H. H., thinks "Fluidextractum" a good illustration of the fantastic Latin that may be evolved by American scientists. He points out that it is against all accepted practice to include or hook up a prefix between two root words.—J. Am. M. Ass. 1910, v. 54, p. 396. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 87.

Remington, Jos. P., resents the criticism of the title "Fluidextractum" which he attributes to the late Charles Rice.—J. Am. M. Ass. 1910, v. 54, p. 396. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 87.

Oldberg, Oscar, thinks that among the changes in nomenclature that should not have been made is the substitution of the philologically awkward title fluidextractum, which cannot with propriety be sufficiently abbreviated as can the title extractum fluidum.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 760.

Kebler, L. F., can see no objections to the use of the word "fluidextractum." He thought it a little cumbersome at first, but he has come to rather like the word.—*Ibid.* p. 766.

Good, James M., states that he has never been very much in love with the word "fluidextractum," and expresses the belief that the grouping of extracts and fluid extracts could readily be accomplished by continuing the old titles.—*Ibid.* p. 766.

The Kings County Pharmaceutical Society recommends that a time-limit should be fixed for the fluid extracts of coca, digitalis, and colchicum and for aspidium.—Drug. Circ. 1910, v. 54, p. 254.

An editorial (Am. Druggist, 1910, v. 56, pp. 3–4), in discussing the stability of fluid extracts, asserts that time limit labels appear to be wholly superfluous except as regarding fluid extracts of coca.

Brown, Linwood A., thinks that many fluid extracts unless properly kept, will lose alcohol by evaporation, causing a marked precipitation, which may carry down with it a considerable portion of the active ingredients, though in a great many instances the precipitates have been found to be physiologically inactive.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 168.

Arny and Oxley discuss the use of repercolation in the making of fluid extracts, review some of the literature on the subject and report a number of experiments from which they conclude that repercolation in the hands of the average manipulator does not yield uniform results.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1104–1110.

Scoville, Wilbur L., points out that in the making of fluid extracts by repercolation, three factors are involved: first, the drug; second, the menstruum; and third, and most important, the operator. Repercolation will give good results with a good operator and poor results with a bad operator.—*Ibid.* p. 1111.

Remington, Joseph P., points out that the use of repercolation in the making of fluid extracts was introduced by Squibb who considered it to be desirable for economic reasons, also because of the fact that it eliminated the use of heat.—*Ibid.* p. 1111.

Bianchi, A., discusses fluid extracts in an 18 page supplement to Boll. chim. farm. 1910, v. 49.

Herzog and Fosse discuss the relative value of percolation and of maceration with expression in the production of fluid extracts. They report a number of results which appear to indicate that percolation yields a preparation containing more extractive and having a higher specific gravity.—Ber. pharm. Gesellsch. 1910, v. 20, 330–350.

For a controversy by Kroeber and others on the production of fluid extracts under pressure see Pharm. Zentralh. 1910, v. 51, pp. 41–47; 83–86; 150–153; 153–154.

Remington, J. P., thinks that for many concentrated preparations such as fluid extracts, percolation is the only practical process.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 151.

Blumenschein, Fred J., discusses the use of fluids, fluid extracts and solubles in the manufacture of galenicals, and points out the impracticability of making official preparations from non-official compounds.—Proc. Pennsylvania Pharm. Ass. 1910, pp. 227–232.

Bruder, O. E., thinks that the use of fluid extracts in making preparations should be avoided as far as possible and the drug itself used.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 30.

Forbes, J. Winchell, states that there has been considerable discussion of the practice of making tinctures with fluid extracts for some time, and both sides have unanswerable arguments.—Midl. Drug. 1910, v. 44, pp. 559–560.

Needham, R. H., recommends that as far as possible fluid extracts be eliminated from the manufacture of galenicals.—Proc. Texas Pharm. Ass. 1910, p. 71.

Beringer, George M., states that while the U. S. P. has generally adopted the principle of making syrups from fluid extracts, it is characteristic of most of the foreign pharmacopœias that they require that these preparations be made direct from the drug.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1243.

Raubenheimer, Otto, censures manufacturing houses for printing on the labels of their fluid extracts not only formulas for the extemporaneous preparation of syrups, tinctures and wines, but even infusions.—*Ibid.* p. 1091.

The Denver Branch of the A. Ph. A. protests against the attachment of any formula for an official preparation on a fluid extract container, unless the U. S. P. and N. F. specifies the use of a fluid extract in the production of the particular preparation.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 97.

Goetting, E. C., points out that fluid extracts are not very much favored in Germany.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1158.

Wilbert, M. I., calls attention to a recent discussion on the fluid extracts of the German Pharmacopœia and the statement that the expectation expressed 20 years ago, that this class of preparations would ultimately displace all other liquid preparations, has failed to materialize.—Am. J. Pharm. 1910, v. 82, p. 485.

An editorial (N. A. R. D. Notes, 1910, v. 10. p. 163) states that while the processes for fluid extracts are fine theoretically, they are not satisfactory for the retail pharmacist who is desirous of making his own preparations in an economical and satisfactory manner.

Beringer, George M., thinks that the instability of fluid extracts is largely due to the extractive in the final exhaustion and the changes that it undergoes in evaporation.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 781.

Hague, George W., discusses the manufacture of fluid extracts by the pharmacist.—Merck's Rep. 1910, v. 19, p. 33.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, pp. 469–470, 511), in discussing the nature and composition of official fluid extracts, states that these preparations are more frequently used than any of the galenical preparations because of their concentrated form and their convenient relation to the drugs from which they are made.

Havenhill, L. D., thinks that as therapeutic agents, the importance of fluid extracts has been exaggerated and therefore he does not recommend an increase in their number.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 781.

Fantus, Bernard, thinks there is no necessity for fluid extract of digitalis and similarly potent drugs, their tinctures being sufficiently concentrated.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 154.

Hommell, Philemon E., thinks that fluid extracts of calamus, cypripedium, euonymus and geranium should be dismissed from the U. S. P.—Merck's Rep. 1910, v. 19, p. 122.

Hereth, F. S., discusses the possible variation of the alcoholic content of menstrua and suggests that the Pharmacopœia permit of variation in the alcoholic strength of fluid extracts.—Practical Druggist, 1910, v. 28, p. 64.

Scoville, W. L., reports observations on the permanence of alkaloidal fluid extracts and tinctures, and presents a table giving the result of assays of preparations over a period of from one to three years.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 874–883.

Dohme and Engelhardt report a continuance of their experiments on the stability of fluid extracts containing alkaloids.—*Ibid.* pp. 872–873.

Gordin, H. M., discusses the identification of fluid extracts.—Merck's Rep. 1910, v. 19, p. 128.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, pp. 34–35) present a table showing the proposed standards, range of specific gravity and range of percentage by volume of alcohol for liquid extracts included in the Ph. Brit.

Linke discusses the preparation and valuation of fluid extracts.—Apoth. Ztg. 1910, v. 25, pp. 529–531, 543.

Derlin, L., reports the extract content of a number of Ph. Germ. IV fluid extracts.—Pharm. Ztg. 1910, v. 55, p. 244.

Kunze, in a contribution on the examination of drugs and galenical preparations, presents a table showing the specific gravity, extract content and ash content of a number of official, Ph. Germ. IV fluid extracts.—*Ibid.* p. 158.

An editorial (N. A. R. D. Notes, 1910–11, v. 11, p. 388) comments on the desirability of introducing 50 per cent tinctures in the U. S. P. IX.

FLUIDEXTRACTA N. F.

Bruder, O. E., thinks it would be good policy, and good judgment also, to include in the N. F. a process for making fluid extracts that is at once economical, cleanly, quick and withal reliable. He suggests using the first 75 per cent of the amount of drug used as the finished fluid extract.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 31.

Hallberg, C. S. N., thinks the N. F. method of making fluid extracts superior to that of the U. S. P. and advises the general adoption of the N. F. process.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1113.

Hereth, F. S., thinks there are strong objections to the proposed substitution of 50 per cent tinctures for fluid extracts, and adds that but few drugs can be exhausted by single percolation, and moreover fluid extracts have been so long and favorably known that they could not well be replaced by concentrated tinctures.—Practical Druggist, 1910, v. 28, p. 63.

FLUIDEXTRACTUM ADONIDIS N. F.

Fichtenholz, A., quotes Tschirch as authority for the derivation of the word adonis from the name of the Phoenician or Assyrian god of the sun, *Adonis.*—J. pharm. et chim. 1910, v. 2, p. ii.

Caesar & Loretz (Jahres-Ber. 1910, p. 34) report that Focke has found the herb of *Adonidis vernalis* to compare favorably with digitalis in activity.

FLUIDEXTRACTUM ALETRIDIS N. F.

Holm, Theo., describes and illustrates the internal structure of the vegetative organs of *Aletris farinosa* L.—Merck's Rep. 1910, v. 19, pp. 33–35.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 7) report that a sample purporting to be the ground rhizome of *A. farinosa,* contained added wheat starch, and a large admixture of marshmallow.

Sayre, L. E., reports on 1 sample of fluid extract of aletris: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1095.

Puckner, W. A., in a report on *A. farinosa,* states that the remarkable powers attributed to this drug have not been realized by reliable observers. The drug enters into the composition of a number of nostrums and as a simple bitter is superfluous.—Rep. Council Pharm. & Chem. 1910, p. 10.

FLUIDEXTRACTUM ANGELICÆ RADICIS N. F.

Rikli, M., reports a comprehensive study of angelica: its occurrence in Greenland, in other northern countries, in middle Europe, its cultivation and the varieties of the drug occurring in cultivation. The article is liberally illustrated.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 49–56, 65–71, 82–88, 97–105.

LaWall and Bradshaw report finding 5.15 per cent ash in angelica root.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

FLUIDEXTRACTUM APII GRAVEOLENTIS N. F.

LaWall and Bradshaw report finding 7.2 per cent ash in celery seed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

FLUIDEXTRACTUM ARNICÆ RADICIS N. F.

Holmes, E. M., notes that, owing to the scarcity of true arnica, other roots are mixed with it even to 20 per cent. He describes differential characters of the rhizomes in powder.—Pharm. J. 1910, v. 30 (84), p. 51.

Rusby, H. H., states that he has met with arnica root which 4 times out of 5 is not arnica root or is largely mixed with other root. He has also met with large amounts of arnica flowers consisting of British inula; also arnica flowers of great antiquity and a mass of worms.—Practical Druggist, 1910, v. 27, p. 423.

Beilstein, Christian, reports that 2 lots of arnica root were adulterated with some unknown root. Two other lots were found to contain large proportions of the leafy part of the plant.—Proc. N. W. D. A. 1910, p. 104.

LaWall and Bradshaw report finding 9.07 per cent ash in arnica root.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

FLUIDEXTRACTUM ASCLEPIADIS N. F.

Rosenberg, D. H., asserts that asclepias tuberosa is a remedy that the Eclectic fathers employed in the treatment of pleurisy and in all the diseases requiring a diaphoretic. It is also diuretic, laxative, tonic, expectorant, antispasmodic and carminative.—Eclectic M. J. 1910, v. 70, p. 186.

Felter, H. W., asserts that asclepias is a mild but efficient remedy for respiratory troubles and the exanthemata. It favors secretion and exerts its force upon the parts supplied by the bronchial arteries.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 205.

FLUIDEXTRACTUM ASPIDOSPERMATIS N. F.

An unsigned article (Bull. Imp. Inst. 1910, v. 8, pp. 288–289) discusses the origin and uses of quebracho.

Goding, Frederic W., reports on the manufacture and export of quebracho from the Plata river region.—Oil, Paint and Drug Reporter, 1910, v. 77, April 18, p. 28G.

Rusby, H. H., asserts that he has met with quebracho bark of a spurious variety; also quebracho bark from which the part containing the valuable alkaloids has been removed by the foreign manufacturer.—Practical Druggist, 1910, v. 27, p. 424. Also Drug. Circ. 1910, v. 54, p. 617.

Vanderkleed, Chas. E., reports 3 assays of quebracho; lowest, 0.38, highest, 1.54 per cent alkaloids; 2 above and 1 below standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

FLUIDEXTRACTUM CAMELLIÆ N. F.

Cox, E. H., discusses tea culture in Jamaica, outlines the history of the industry and describes the methods of collecting and the preparation of the leaf.—Bull. Dept. Agric., Jamaica, 1910, v. 1, No. 3, pp. 176–181.

Goris and Fluteaux discuss the present state of our knowledge regarding the composition of tea.—Compt. rend. Congr. Internat. Pharm., 1910 (Brussels, 1911), pp. 154–155.

FLUIDEXTRACTUM CASTANEÆ N. F.

LaWall and Bradshaw report finding from 3.2 to 4.4 per cent ash in chestnut leaves.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

FLUIDEXTRACTUM COFFEÆ N. F.

Morgan, H. D., discusses the origin, introduction, cultivation and adulteration of coffee.—Pacific Pharmacist, 1909–10, v. 4, pp. 223–227.

Schneider, Albert, points out that the microscope does not differentiate different brands of coffee. He describes the structural characteristics of coffee and states that the drug is adulterated with roasted cereals, figs, prunes, coffee hulls, chicory, carrot roots, beet roots, nut shells, etc.—Merck's Rep. 1910, v. 19, p. 62.

LaWall and Bradshaw report finding from 3.5 to 4.05 per cent ash in roasted coffee.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Goris and Fluteaux discuss the present state of our knowledge regarding the composition of coffee.—Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 141–148.

FLUIDEXTRACTUM CORNUS N. F.

Oldberg, Oscar, states that the name cornus is derived from the Latin *cornu*, a horn.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 757.

FLUIDEXTRACTUM COTO N. F.

Rusby, H. H., asserts that very little of the coto bark or Para coto bark sold in this country in either the whole or the powdered form is genuine.—Drug Circ. 1910, v. 54, p. 7. Also Practical Druggist, 1910, v. 27, p. 424.

Schneider, Albert, states that coto bark is now one of the most commonly adulterated drugs on the market. He enumerates the structural characteristics of true coto, and asserts that the spurious cotos show a similar histology, but are not spicy or pungent. True coto is very spicy and pungent.—Merck's Rep. 1910, v. 19, p. 190.

Caesar & Loretz (Jahres-Ber. 1910, p. 85) outline Fromme's method for the assay of cotoin in coto.

FLUIDEXTRACT OF DIOSCOREA.

Bartlett, Harley Harris, discusses the source of the drug dioscorea, presents a synopsis of the species of Dioscoreæ and reviews the taxonomic history of the Dioscoreæ of the United States.—Bull. No. 189, Bur. Plant Ind., U. S. Dept. Agric. 1910, pp. 29.

Adams, F. X., points out that dioscorea villosa is indicated by pain in the abdomen; tenderness of abdomen. Tympanitic abdomen with constipation. Tongue broad, yellow or yellowish white coating, edges red. This is a good remedy for after pains and one of the best in appendicitis.—Eclectic M. J. 1910, v. 70, p. 74.

Puckner, W. A., reports that *Dioscorea villosa* has been little used in medicine. It contains a saponin and an acrid resin and is said to possess expectorant, diaphoretic and, in large doses, emetic properties. It has been recommended as a remedy in biliary colic and in muscular rheumatism. Its value in such conditions has not been verified to an extent entitling it to consideration as a useful remedy.—Rep. Council Pharm. & Chem. 1910, p. 10.

FLUIDEXTRACTUM DULCAMARÆ N. F.

LaWall and Bradshaw report finding 4.3 per cent ash in bittersweet twigs.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

FLUIDEXTRACT OF ECHINACEA.

Lloyd, John Uri, states that echinacea was discovered by North American Indians, introduced by an illiterate "family practitioner", and fathered by John King, an Eclectic.—Eclectic M. J. 1910, v. 70, p. 160.

Hallberg, C. S. N., states that upwards of 200,000 pounds of echinacea were shipped out of Kansas in a single year.—Tr. Am. M. Ass., Sec. Pharm. and Therap., 1910, p. 39.

Moser, John, discusses echinacea and describes a spurious root that appeared in the fall of 1909.—Am. J. Pharm. 1910, v. 82, pp. 224-226.

Rusby, H. H., states that he has met with echinacea which in about half of the instances consisted of a wholly spurious root.—Practical Druggist, 1910, v. 27, p. 423.

Beilstein, Christian, reports that 3 lots of echinacea were found to consist of the roots of some species of *Brauneria* other than *Brauneria pallida,* which is the source of true echinacea. Another lot was found which consisted of the roots of *Rudbeckia fulgida.*—Proc. N. W. D. A. 1910, p. 105.

Monroe, A. Leight, quotes Hard who asserts that echinacea has been one of the most valuable internal remedies used by him. He has carefully studied its action on the component parts of the body and is satisfied that it counteracts the effects of toxins which have entered the circulation.—Hahnemann. Month. 1910, v. 45, p. 69.

Thomas, R. L., in an open letter, commenting on the work of the Council on Pharmacy and Chemistry of the American Medical Association says: "It seems absurd to us to have the erudite but unsophisticated Council of Pharmacy reject remedies like cactus, helonias, dioscorea, echinacea and baptisia (see Journ. of A. M. A.), because they are not recommended by Cushny, Brunton, Dixon, Briz, Sollman, or the United States Dispensatory.—Eclectic M. J. 1910, v. 70, p. 157. See also p. 178.

FLUIDEXTRACTUM IRIDIS N. F.

Rusby, H. H., asserts that iris is largely used and should be restored to the Pharmacopœia. A considerable part of that employed appears to be derived from *Iris missouriensis*. This rhizome is larger and is more readily and cheaply collected and its relative properties should be ascertained. If equally good, it should be recognized.—Drug. Circ. 1910, v. 54, p. 616.

Ellingwood, Finley, calls attention to the possible use of iris in the treatment of stubborn cases of psoriasis.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 158.

Harbert, J. P., thinks that iris should not be overlooked in rneumatic, scrofulous and syphilitic eye affections.—Eclectic M. J. 1910, v. 70, p. 192.

Monroe, A. Leight, quotes McNeil, who enumerates the symptoms that are curable by iris. He asserts that iris is indicated in any of the diseases of the throat, including diphtheria, when it burns and smarts with a feeling of enlargement, as if there were a burning cavern.—Hahnemann. Month. 1910, v. 45, p. 72.

FLUIDEXTRACTUM KAVÆ N. F.

LaWall and Bradshaw report finding 5.2 per cent ash in Kava-Kava.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

FLUIDEXTRACT OF RHAMNUS CATHARTICA.

LaWall and Bradshaw report finding 2.6 per cent ash in two samples of buckthorn berries.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Beilstein, Christian, reports that two lots of buckthorn berries consisted of immature berries instead of the ripened fruit, which should be used.—Proc. N. W. D. A. 1910, p. 105.

FLUIDEXTRACTUM RUMICIS N. F.

LaWall and Bradshaw report finding 6.1 per cent ash in rumex.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

FLUIDEXTRACT OF SOLANUM.

Holm, Theo., describes a flowering branch and the structural characteristics of *Solanum carolinense* L.—Merck's Rep. 1910, v. 19, pp. 249-251.

LaWall and Bradshaw report finding 6.3 per cent ash in horse nettle herb.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

FLUIDEXTRACTUM STERCULIÆ N. F.

Tunmann, O., asserts that the center of production for kola is in Mandingo—and Asante—territory. He gives additional data regarding the amount and the value of kola exported from different sections of Africa.—Apoth. Ztg. 1910, v. 25, p. 414.

Harris, Wm., states that kola was first brought to Jamaica in a ship from Guinea, about 1681.—Bull. Dept. Agric., Jamaica, 1910, v. 1, No. 3, pp. 184–185.

Badermann, G., in discussing the cultivation of official plants in Tongo asserts that experiments with kola have not been satisfactory. The plant does not appear to do well in dry regions.—Arch. Pharm. 1910, v. 248, p. 258.

Dohme and Engelhardt state that the Ph. Hung. III does not give an assay process for sterculia seed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1186.

Goris and Fluteaux discuss the present state of our knowledge regarding the composition of kola.—Compt. rend. Congr. Internat. Pharm., 1910 (Brussels, 1911), pp. 148–151.

Goris reports a second crystalline compound, phenolic in nature, obtained from fresh kola.—*Ibid.* pp. 158–160.

Caesar & Loretz (Jahres-Ber. 1910, pp. 100–101) outline the Keller-Siedler-Fromme method of assay for kola, and point out that the Ph. Austr. VIII and the Ph. Helv. IV require 1.5 per cent of alkaloid while the remaining pharmacopœias have no standard at present.

Lyons, A. B., reports a comparison of the requirements and methods of assay for kola included in the Ph. Austr., Ph. Fr. and the Ph. Helv.—Am. Druggist, 1910, v. 56, p. 104.

Scoville, W. L., thinks that the U. S. P. method of assay for guarana can be used for kola and its preparations.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 822.

Engelhardt, Hermann, reports that it has been recommended on various occasions to assay this drug. The samples examined during the year 1909 were of a very good quality, assaying from 1.5 to 2 per cent of caffeine.—*Ibid.* p. 1258.

Vanderkleed, Chas. E., reports 13 assays of kola nut; lowest, 0.900, highest, 1.890 per cent alkaloids; 12 above and 1 below standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Dohme and Engelhardt point out that the Ph. Hung. III requires that fluid extract of sterculia contain 1 per cent of caffeine when assayed according to the official method which they give.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1181.

Warin, J., and others discuss the Ph. Fr. V fluid extract of kola.—J. pharm. et chim. 1910, v. 1, pp. 543–545; v. 2, p. 20; pp. 122–124; pp. 350–354.

Ellis, George W., reporting on the kola nut and its uses in Liberia, states that its medicinal properties are said to be exceedingly effective in asthma, headaches, seasickness, and in feebleness of the circulatory and nervous systems, but as a drug its value is still undetermined.—Cons. & Tr. Rep. April 16, 1910, p. 320.

FLUIDEXTRACTUM TURNERÆ N. F.

Sayre, L. E., reports on 1 sample of fluid extract of damiana: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1096.

Ellingwood, Finley, calls attention to the action of damiana in establishing in a normal manner the menstrual flow of young girls.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 159.

FLUIDEXTRACTUM VERBASCI N. F.

LaWall and Bradshaw report finding 24.9 per cent ash in mullein.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

FLUORESCEIN.

Koldewijn, H. B., was unable to demonstrate the presence of fluorescein in the milk of a goat receiving as high as 1 gm. of the drug daily.—Arch. Pharm. 1910, v. 248, p. 639.

FŒNICULUM.

The Committee of Reference in Pharmacy outlines a modification for the Ph. Brit. description for foeniculi fructus.—Brit. & Col. Drug. 1910, v. 58, p. 13.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 37) point out that the Ph. Germ. V permits a maximum ash content of 10 per cent in fennel.

LaWall and Bradshaw report finding from 6.83 to 11.8 per cent ash in fennel seed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Schneider, Albert, calls attention to the structural characteristics of fennel, and states that this drug is not generally adulterated intentionally, though very generally impure, the presence of sand, stem tissue, dirt or other material often amounting to adulteration.—Merck's Rep. 1910, v. 19, p. 191.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 70) present in the form of a table the comparative measurements of various varieties of fennel as obtained by Hartwich and Jama.

Rusby, H. H., states that he has met with many lots of fennel so mouldy and musty as to be unfit for use.—Practical Druggist, 1910, v. 27, p. 424.

Beilstein, Christian, reports fennel seed as containing foreign seeds of various kinds.—Proc. N. W. D. A. 1910, p. 99.

FRANGULA.

Oldberg, Oscar, states that the name frangula is derived from the Latin "*frangere*" to break.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 757.

Schneider, Albert, calls attention to the structural characteristics of frangula.—Merck's Rep. 1910, v. 19, p. 191.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 26) point out that the Ph. Germ. V restricts the thickness of frangula bark to a maximum of 1.2 mm.

LaWall and Bradshaw report finding from 3.2 to 5.2 per cent ash in buckthorn bark.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Herzog and Fosse report obtaining 19.17 per cent of extractive from frangula by means of percolation while maceration and expression yielded but 13.7 per cent.—Ber. pharm. Gesellsch. 1910, v. 20, p. 336.

Kroeber, Ludwig, reports some experiments in the making of fluid extract of frangula by the use of Bruns' pressure percolator. He reiterates the frequently made observation that frangula contains a larger percentage of anthraquinone derivatives than does cascara sagrada.—Pharm. Zentralh. 1910, v. 51, p. 44.

GALLA.

The Committee of Reference in Pharmacy thinks that in connection with the Ph. Brit. monograph for galla, the words "puncture and" should be omitted.—Brit. & Col. Drug. 1910, v. 58, p. 13.

Schneider, Albert, enumerates the structural characteristics of different varieties of galls and states that no wood fiber is present.—Merck's Rep. 1910, v. 19, p. 191.

Havenhill, L. D., outlines a modified formula for the tincture of nutgall.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 787.

Hommell, Philemon E., states that tincture of nutgall is rarely prescribed and should be eliminated.—Merck's Rep. 1910, v. 19, p. 122.

Koch, William J., asserts that in nutgall ointment, an ointment base consisting of 1 part hydrous wool-fat, and 3 parts petrolatum will make a nice, smooth, absorbent ointment.—Am. Druggist, 1910, v. 56, p. 239.

Osborne, Oliver T., asserts that, if there is any reason why the ointment of galls is better than the ointment of tannic acid, it must be because it is milder. It would seem, then, that the tannic acid ointment could be diluted by the prescriber to meet the astringency desired and the ointment of galls be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 51.

GAMBIR.

Beringer, George M., asserts that the change to gambir has not proven satisfactory and that physicians in his vicinity are still using catechu.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 782.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 77, January 10, p. 7) discusses the economic conditions of the market for gambir.

DuBois, James T., reports that for the first nine months of 1910, the Straits Settlements exported a total of 16,021 tons of gambir, of which 5,846 tons went to the United States, a decrease of 2,300 tons.—Cons. & Tr. Rep. 1910, p. 1164.

Rusby, H. H., asserts that gambir is very prone to contain excessive amounts of wood and bark tissue and other impurities He does not think it practicable to exclude all of this contamination and suggests that the increase of the normal amount be checked by specifying the allowable limit of insoluble matter.—Drug. Circ. 1910, v. 54, p. 618.

Young, J. B., reports examining 8 samples of gambir. The percentages of solubility in alcohol varied from 76.9 to 80.8 per cent, and the percentage of ash varied from 4.3 to 32 per cent.—Proc. Massachusetts Pharm. Ass. 1910, p. 159.

Havenhill, L. D., outlines a modified formula for the compound tincture of gambir.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 787.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 16) point out that the Ph. Germ. V requires that catechu be derived from the heart wood of *Acacia catechu* Linné and *A. suma* Kurz by infusion and subsequent concentration of the extract.

Hartwich, C., points out that the Ph. Germ. V limit for catechu insoluble in alcohol (30 per cent) is unnecessarily high, the Ph. Helv. IV and Ph. Germ. IV permitting a residue of 15 per cent.—Apoth. Ztg. 1910, v. 25, p. 1046.

Patch, E. L., reports an assay of 2 samples of catechu: 88 per cent soluble in alcohol, 3 per cent ash; 68 per cent soluble in alcohol, 3 per cent ash.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 743.

GELATINUM.

Hemm, Francis, states that while both the sheet and shredded varieties are official, the sheet is the most widely employed in pharmacy and medicine, the French or silver label variety being generally considered the superior.—Proc. Missouri Pharm. Ass. 1910, p. 99.

The Committee of Reference in Pharmacy suggests that in connection with the Ph. Brit. test for gelatin the alum solution used in testing should be described as dilute.—Brit. & Col. Drug. 1910, v. 58, p. 13.

An editorial (Bull. Am. Pharm. Ass. 1910, v. 5, p. 582) states that in a recent examination of 9 different samples of gelatin, 7 indicated sulphites.

Hart, Wm. Beamont, reports finding a number of samples of gelatin sold for household use which, on examination, were found to contain from 0 to 56.3 milligrammes of copper per kilogramme.—Brit. Food J. 1910, v. 12, p. 3.

Herold, Julius, discusses the valuation of gelatin by determining the melting point of jellies of known gelatin content.—Chem. Ztg. 1910, v. 34, pp. 203–204.

Forrest, J. A., says that when purity and the highest brilliancy in the finished article are required, gelatin ought always to be washed before it is used.—Pharm. J. 1910, v. 30 (84), p. 292.

Dhéré and Gorgolewski present a note on the preparation and certain physico-chemical properties of demineralized gelatin.—Compt. rend. Acad. sc. 1910, v. 150, pp. 934–936.

Pégurier, G., suggests a modification of the method of preparing the Ph. Fr. V saline gelatin solution, improperly but commonly called gelatin serum.—Bull. pharm. sud-est, 1910, v. 15, pp. 377–379.

The Semaine Médicale reviews a number of articles on the danger of subcutaneous injection of gelatin in renal affections.—Nouv. remèdes, 1910, v. 26, p. 309.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 190–193) reviews a number of communications on the use of sterilized gelatin solutions.

GELATINUM GLYCERINATUM.

Hemm, Francis, thinks that the formula for glycerinated gelatin works out well and the product seems to answer its purposes admirably.—Proc. Missouri Pharm. Ass. 1910, p. 100.

Mittelbach, Wm., thinks that glycerinated gelatin might well be left out of the U. S. P. and recognized in the National Formulary.—*Ibid.* p. 98.

GELSEMIUM.

Sayre, L. E., reports some additional work on gelseminine and other constituents of gelsemium.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 949–957.

Moore, Charles Watson, contributes a note on the constituents of gelsemium.—Chem. & Drug. 1910, v. 77, p. 726. See also J. Chem. Soc., Lond., 1910, v. 97, pp. 2223–2233.

LaWall and Bradshaw report finding 1.4 per cent ash in gelsemium root.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Scoville, W. L., thinks that gelsemium and its preparations should be assayed.—*Ibid.* p. 822.

Lyons, A. B., reports the requirements and methods of assay for gelsemium included in the Ph. Helv.—Am. Druggist, 1910, v. 56, p. 102. See also p. 7.

Githens and Vanderkleed, in a discussion on physiologic standardization, present a comparison of such standardization with results obtained by chemical assay in connection with gelsemium.—Am. J. Pharm. 1910, v. 82, p. 464. Also Proc. Am. Pharm. Ass. 1910, v. 58, p. 922.

Rippetoe, John R., thinks that the fluid extract of gelsemium should have an alkaloidal standard and assay process for determining the same. He has had very satisfactory results from a modification of Webster's method which he outlines.—*Ibid.* p. 1061.

Havenhill, L. D., outlines a modified formula for making the tincture of gelsemium and suggests that this preparation should be assayed.—*Ibid.* p. 787.

Thomas asserts that gelsemium stands right by the side of bryonia in efficiency.—Eclectic M. J. 1910, v. 70, p. 62.

Templeton, Percy Lee, confesses that gelsemium is a remedy on which he places little reliance.—*Ibid.* p. 396.

Sinkler, Warton, reports a case of poisoning from 5 drops of gelsemium, 3 times a day for two weeks.—*Ibid.* p. 583.

An editorial (Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 279) asserts that gelsemium is a reliable remedy when there is determination of blood to the head, as indicated by bright eyes, contracted pupils, restlessness and agitation of the nervous system.

GENTIANA.

Fichtenholz, A., quotes Tschirch as authority for the derivation of the word gentian from King Gentius or Genthius, who died 167 B. C.—J. pharm. et chim. 1910, v. 2, p. ii.

Tunmann, O., discusses the collection of gentian and presents some figures showing the amount gathered in France, Spain, Turkey and other countries.—Apoth. Ztg. 1910, v. 25, p. 453.

Lochmann, Rudolf, reports a comparative study of cultivated and wild-growing gentian.—Pharm. Post, 1910, v. 43, pp. 397–400.

Schneider, Albert, calls attention to the structural characteristics of gentian.—Merck's Rep. 1910, v. 19, p. 191.

Bourquelot and Bridel discuss the influence of the method of dessication on the composition of gentian root; and the preparation of gentiopicrin f om the dried root.—J. pharm. et chim. 1910, v. 1, pp. 156–162.

The Committee of Reference in Pharmacy points out that gentian root is liable to considerable variation and sophistication and should be required to yield at least 33 per cent of dry extract to cold water and not more than 6 per cent of ash on incineration.—Brit. & Col. Drug. 1910, v. 58, p. 13.

Wiley, H. W., reports that, with one exception, gentian root continues to be of excellent quality.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

Rusby, H. H., thinks that the acceptability of gentian depends on the percentage of extractive matter.—Drug. Circ. 1910, v. 5, p. 617.

Evans, J., points out that powdered gentian root is sometimes grossly adulterated. Genuine gentian should be free from both starch and sclerenchymatous cells or fibres. Ground olive stones are mostly made up of sclerenchyma, so its presence in gentian is easily detected.—Brit. & Col. Drug. 1910, v. 57, 133.

LaWall and Bradshaw report finding from 2.3 to 3.7 per cent ash in gentian root.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Rusby, H. H., states that he has met with powdered gentian consisting of 50 per cent of fiber, apparently from gunny sacks; also powdered gentian consisting of nearly one-half exhausted birch bark; and powdered gentian heavily adulterated with damaged wheat flour.—Practical Druggist, 1910, v. 37, p. 423.

Beilstein, Christian, reports powdered gentian as containing starch.—Proc. N. W. D. A. 1910, p. 99.

Beal, George D., reports 2 samples of powdered gentian as containing respectively 15 per cent and 20 per cent of ground olive pits.—Proc. Ohio Pharm. Ass. 1910, p. 72.

Dohme and Engelhardt outline the Ph. Hung. III method of making extract of gentian.—Proc. Am. Pharm. Ass. 1910, v. 58. p. 1179.

Herzog and Fosse report obtaining 43.69 per cent of extract by percolation, while maceration and expression yielded but 33.16 per cent.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 335–336.

Havenhill, L. D., outlines a modified formula for the compound tincture of gentian.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 788.

Sayre, L. E., reports on 44 samples of compound tincture of gentian: 18 passed; 26 illegal.—*Ibid.* p. 1096. See also Proc. Kansas Pharm. Ass. 1910, p. 58, and Bull. Kansas Bd. Health, 1910, v. 6, p. 41.

Pollard, J. W., reports examining 10 samples of tincture of gentian compound. The extractive varied from 1.08 to 5.01 per cent and the percentage of alcohol from 39.5 to 56.4.—Proc. Massachusetts Pharm. Ass. 1910, p. 160.

GERANIUM.

Schneider, Albert, calls attention to the structural characteristics of geranium.—Merck's Rep. 1910, v. 19, p. 191.

LaWall and Bradshaw report finding 6.4 per cent ash in geranium.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Sayre, L. E., reports on 1 sample of fluid extract of Crane's bill: illegal.—*Ibid.* p. 1096.

Ellingwood, Finley, calls attention to the use of geranium in the treatment of gastric ulcer. He believes this drug to be very near to a specific in this condition when combined with calcined magnesia or neutralizing cordial to neutralize the excessive acidity.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 159.

Leming, W., points out that geranium maculatum is indicated in sub-acute and chronic catarrhal states and mucous fluxes, with great relaxation and tendency to ulceration.—Eclectic M. J. 1910, v. 70, pp. 13–15.

An unsigned article (Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 203) discusses the hypodermic use of specific geranium.

GLANDULÆ SUPRARENALES SICCÆ.

Wood, H. C., jr., in a report on physiological assays, states that, if the suprarenal glands remain official in the next revision of the Pharmacopœia, there should be some standard of strength introduced. At present there is no chemical assay available and the physiological test is one of the simplest of all pharmacological experiments. He outlines a method of assay.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 942.

Osborne, Oliver T., presents a paper on disturbances of the internal secretions clinically considered, with a discussion of the physiology, pathology and therapy of the gland.—J. Am. M. Ass. 1910, v. 54, p. 671.

An editorial (*Ibid.* p. 710), on the activity of commercial suprarenal preparations, calls attention to the recent work of W. H. Schultz (Bull. 61, Hyg. Lab.)

See also Meltzer, S. J.—J. Am. M. Ass. 1910, v. 54, p. 1435.

Additional references on suprarenal extract and its uses will be found in the Index Medicus and J. Am. M. Ass. See also under Epinephrine.

GLANDULÆ THYROIDEÆ SICCÆ.

Hunter, Andrew, presents a method (modified Dupré) by which one can estimate the iodine content of thyroid gland or other tissue and which, he claims, has a number of advantages over the Baumann method.—J. Biol. Chem. 1910, v. 7, pp. 321–349.

Wood, H. C., jr., in a report on physiological assays expresses the opinion that the thyroid gland does not require physiological standardization, as the work of Hunt has shown that the percentage of combined iodine is an accurate indicator of the quality of the drug and where a chemical test is equally available it should be given the preference to a physiological one.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 940.

Claude and Blanchetière discuss the iodine content of the thyroid gland in its relation to the anatomic constitution of the organ.—J. physiol. et path. gén. 1910, v. 12, pp. 563–579.

Fassin, Louise, makes a contribution on the rôle of iodine in the alexigen power of the thyroid.—Compt. rend. Soc. Biol. 1910, v.69, p. 572.

Juschtschenko, A., reports observations on the fat-splitting and oxidizing ferments of the thyroid and the influence of the latter on the lipolytic and oxidizing processes of the blood.—Biochem. Ztschr. 1910, v. 25, pp. 49–78.

Meltzer, S. J., presents some interesting notes on the physiology, pathology and therapy of the thyroid glands.—J. Am. M. Ass. 1910, v. 54, p. 1433.

Osborne, Oliver T., calls attention to the fact that thyroid is a very potent and insidious drug. He thinks its sale by druggists without a physician's prescription should be prohibited.—*Ibid.* p. 376. See also p. 671.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 265–268) reviews a number of communications on the therapeutic uses of the thyroid gland.

See also J. Am. M. Ass. 1910, v. 55, p. 1980 and Index Medicus.

GLYERINUM.

Moore, G. A., comments on the recovery and purification of soap lye glycerin by the Garrigues process; he also describes and illustrates some of the apparatus used.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 283–293.

Warner, W. J., discusses the practical application of the Twitchell process of fat decomposition and recovery of glycerin.—Am. J. Pharm. 1910, v. 82, pp. 71–80. Also Chem. Eng. 1910, v. 11, pp. 45–48.

Schrameck, M., presents a review of the production and consumption of glycerin in several countries and gives a table showing the variation in the imports of glycerin into the United States.—Oil, Paint and Drug Reporter, 1910, v. 78, November 7, p. 28H.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 78, November 21, pp. 7–8) comments on the economic condition of the glycerin market and points out that of the 85,000,000 pounds of glycerin consumed annually in this country, fully 40,000,000 pounds are imported.

An editorial (Pharm. J. 1910, v. 31 (85), p. 572) states that it would appear certain that the enormous and apparently ever increasing demand for glycerin for the purpose of manufacture of explosives will keep the price at a high level for some time to come.

Ribaut, H., criticises the Ph. Fr. V monograph on glycerin and points out a contradiction in the statements of the text and of the tables as to its density.—Bull. sc. pharmacol. 1910, v. 17, p. 145.

The Committee of Reference in Pharmacy submits a modified monograph with tests which they recommend to be included in the Ph. Brit. in place of that now official.—Brit. & Col. Drug. 1910, v. 58, p. 13.

Starkie, Thomas M., outlines tests and requirements for the official monograph on glycerin.—Am. J. Pharm. 1910, v. 82, pp. 253–256.

Pearson, W. A., reports that much trouble has been had in obtaining glycerin which would answer the U. S. P. tests for absence of butyric acid. An appreciable fruit-like odor is developed in many lots in which great care has been taken during the manufacturing.—Proc. Pennsylvania Pharm. Ass. 1910, p. 138.

Rosengarten, George D., points out that it is apparently difficult to eliminate the last traces of butyric acid from glycerin. In almost every examination of glycerin a fruity odor is noticed when treated with alcohol and sulphuric acid.—Am. J. Pharm. 1910, v. 82, p. 31.

Eldred, Frank R., states that the strength of glycerin is much more conveniently determined by the refractive index than by the specific gravity. The determination of acidity by titration with weak standard alkali, using phenolphthalein as indicator, affords useful information in regard to quality.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 892.

Sayre, L. E., reports on 8 samples of glycerin: 1 passed; 7 illegal.—*Ibid.* p. 1096.

The Local Government Board (38th Ann. Rep. Part II) reports 5, out of 177, samples of glycerin examined in 1908, not up to standard.—Pharm. J. 1910, v. 30 (84), p. 33.

Beringer, George M., calls attention to the advantage secured by the addition of glycerin to some of the official syrups and points out that this idea is being introduced in some of the foreign pharmacopœias.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1243.

An editorial note (Therapist, Lond., 1910, v. 20, p. 15) states that glycerin sprayed into the nostrils with an atomizer allays the burning sensation so distressing in acute coryza and catarrh.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 195–197) calls attention to several communications suggesting the use of glycerin in the treatment of pernicious anæmia.

GLYCERITA.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, pp. 221, 256) discusses the nature of glycerites and the possible uses of the preparations official in the U. S. P.

GLYCERITUM BOROGLYCERINI.

Eliel, Leo, states that colorless glycerite of boroglycerin may readily be prepared by using boric acid free from heavy metals and responding to the U. S. P. test for limit of iron. Using "C. P." glycerin and being careful not to permit it of a higher temperature than 150°.—Proc. Pennsylvania Pharm. Ass. 1910, p. 364.

Eberle, E. G., recommends that the formula for glycerite of boroglycerin be omitted as only a few druggists make it.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

The Committee of Reference in Pharmacy suggests that for glycerite of boric acid crystals be used, as these give a clearer solution. The boric acid should be added to the glycerin and the whole boiled down with constant stirring to the required weight.—Brit. & Col. Drug. 1910, v. 58, p. 13.

GLYCERITUM FERRI, QUININÆ ET STRYCHNINÆ PHOSPHATUM.

LaWall, Charles H., reports that a method of quantitatively estimating strychnine in the presence of quinine is needed. In case of an error, where the quantity of strychnine might be in dangerous excess, there is no method of ascertaining whether the proper ratio of the two alkaloids has been used.—Am. J. Pharm. 1910, v. 82, p. 22.

GLYCYRRHIZA.

Tunmann, O., presents data on the import of licorice root at the port of Hamburg; also calls attention to the origin of this drug.—Apoth. Ztg. 1910, v. 25, p. 465.

The Chemist and Druggist (1910, v. 77, p. 855) reports that unusually large quantities of licorice root are now being collected in the Northern Caucasus, the Trans-Caucasus, and Central Asia; the root is pressed into bales and sent to Batoum for shipment. The quantity annually exported, chiefly to the United States, is on the increase.

Schneider, Albert, calls attention to the structural characteristics of glycyrrhiza, and states that this drug is not generally adulterated, but there are many commercial grades and varieties which are not easily distinguished in the powdered form.—Merck's Rep. 1910, v. 19, p. 191.

The Committee of Reference in Pharmacy proposes a modified monograph with characters and tests for glycyrrhizæ radix. The root should yield not less than 20 per cent of dry extract to cold water and afford not more than 6 per cent of ash.—Brit. & Col. Drug. 1910, v. 58, p. 13.

LaWall and Bradshaw report finding 3.85 per cent ash in Spanish licorice, and 4.75 per cent ash in Russian licorice.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Eldred, Frank R., reports that, in examining a large number of lots of powdered licorice root, the yield of ash was found to be from 4 per cent to 7.5 per cent. The powdered extract was found to yield about the same amount of ash.—*Ibid.* p. 892.

Rusby, H. H., states that he has met with ground Spanish licorice consisting wholly of the bark peeled from Russian licorice.—Practical Druggist, 1910, v. 27, p. 423.

Parry, Ernest J., contributes a paper on the licorice juice of commerce, with analytical results obtained from Italian, Anatolian, Spanish and Russian samples and some doubtful or adulterated samples.—Chem. & Drug. 1910, v. 76, p. 19.

Evans Sons Lescher & Webb (Analytical Notes, 1910, pp. 44–45) report that, in a comparative examination of 5 well-known brands of stick liquorice juice, they obtained from 5 to 6 per cent ash; 10 to 30 per cent matter insoluble in water; 14 to 18 per cent moisture; 6.6 to 13 per cent glycyrrhizin; 38.2 to 45.6 per cent starch and gum. They present a modification of Parry's method for estimating the glycyrrhizin, which they assert gives reliable results.

Gane, E. H., calls attention to the requirement for extract of licorice "Not less than 60 per cent should be soluble in cold water." Some idea should be given of the permissible substances in the remaining 40 per cent. The lack of this has caused considerable trouble to many druggists, who have been accused by food and drug commissions of selling adulterated licorice extract.—Drug Topics, 1910, v. 25, p. 228.

The same author states that 1 sample of powdered extract of licorice consisted almost entirely of caramel, probably due to excessive heat in evaporating and drying.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 744.

Wandesleben, Fr., calls attention to a commercial extract of licorice contaminated with metallic copper.—Pharm. Ztg. 1910, v. 55, pp. 58–59.

Dohme and Engelhardt outline the Ph. Hung. III method for making extract of licorice.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1181.

Gane, E. H., asserts that pure extract of licorice should yield a clear solution in water if properly prepared. Too high a temperature during evaporation caramelizes a portion of the extractive. In hot weather a preservative is needed, or the extract will become mouldy.—Drug Topics, 1910, v. 25, p. 229.

Hague, George W., thinks that the U. S. P. formula for fluid extract of glycyrrhiza is complicated and could be simplified. He presents a formula which he thinks to be more practicable.—Merck's Rep. 1910, v. 19, p. 33.

Thome, E. R., thinks the 1890 formula for fluid extract of glycyrrhiza is superior to the one at present official.—Practical Druggist, 1910, v. 28, p. 122.

The Committee of Reference in Pharmacy reports that percolation with an ammoniacal menstruum has been found to give a dark preparation with an unpleasant taste. They recommend that the present Ph. Brit. formula be retained and state that the acidity that rapidly develops in hot weather may be avoided by working quickly or by the addition to the menstruum of a little chloroform, which is dissipated during the subsequent evaporation.—Brit. & Col. Drug. 1910, v. 58, p. 12.

Hommell, Philemon E., thinks that the acacia of the brown mixture should be omitted, as it is incompatible with the spirit of nitrous ether. Glycerin in proper quantity should take the place of gum arabic and a better preparation would result.—Merck's Rep. 1910, v. 19, p. 122.

Balch, A. W., thinks that spirit of nitrous ether should be omitted from compound licorice mixture because of the rapid hydrolysis of the mixture.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 150.

Seely, A. H., presents a formula for compound mixture of glycyrrhiza in which he recommends the use of fluid extract of glycyrrhiza in place of the extract.—*Ibid.* p. 167. See also Hommell.—Merck's Rep. 1910, v. 19, p. 253.

Hankey, William T., thinks that the Pharmacopœia should direct the use of Russian licorice in compound powder of glycyrrhiza.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 106.

The local Government Board (38th Ann. Dep. Part II) reports 7, out of 184, samples of compound licorice powder examined in 1908, not standard.—Pharm. J. 1910, v. 30 (84), p. 33.

GLYCYRRHIZINUM AMMONIATUM.

Riedel's Berichte (1910, p. xxxi) presents a monograph giving the composition, properties and tests for ammoniated glycyrrhizin.

Ware, C. H., thinks that ammoniated glycyrrhizin should become more popular and presents a formula for compound mixture of glycyrrhiza in which ammoniated glycyrrhizin instead of purified extract of licorice, is used.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1268.

GOSSYPII CORTEX.

LaWall and Bradshaw report finding 4.3 and 6.1 per cent ash in cotton root bark.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Sayre, L. E., reports on 2 samples of fluid extract of cotton root bark: both illegal.—*Ibid.* p. 1096.

GOSSYPIUM PURIFICATUM.

Tyler, Frederick J., discusses the varieties of American upland cotton and presents a number of illustrations showing the characteristic features of the plants and a number of charts illustrating the distribution of the several varieties as reported in 1907.—Bull. No. 163, Bur. Plant Ind. U. S. Dept. Agric. 1910, pp. 127.

Dodge, Charles Richards, describes and illustrates the new standardized cotton grades.—Sc. Am. Suppl. 1910, v. 69, pp. 358–359.

The Committee of Reference in Pharmacy points out that in connection with the Ph. Brit. monograph for gossypium "solution of copper ammonio-sulphate" should read "ammoniacal solution of copper oxide."—Brit. & Col. Drug. 1910, v. 58, p. 13.

Helfritz, K., gives some practical information concerning the technical preparation of absorbent cotton.—Pharm. Zentralh. 1910, v. 51, pp. 101–103.

MacNider, G. M., presents a comparison of petroleum ether with ethyl ether for determining fat in cotton products.—Proc. Ass. Off. Agric. Chem. 1910, 27th Ann. Conv., pp. 155–157. (Bull. Bur. Chem., U. S. Dept. Agric. 1911, No. 137.)

GRANATUM.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 26) point out that the alkaloidal content of pomegranate, according to the Ph. Germ. V, is given as a minimum of 0.04 per cent. This is considered to be rather high.

Dohme and Engelhardt outline the Ph. Hung. III test for determining the proper amount of alkaloids present in pomegranate.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1190.

LaWall and Bradshaw report finding 14.6 and 17.4 per cent ash in granatum.—*Ibid.* p. 753.

Caesar & Loretz (Jahres-Ber., 1910, pp. 85–87) outline the Keller-Fromme method of assay for pomegranate root bark, and present a table showing the requirements made for granatum in the several pharmacopœias.

Lyons, A. B., reports a comparison of the requirements and methods of assay for granatum included in the Ph. Japon. and the Ph. Helv.—Am. Druggist, 1910, v. 56, p. 102.

GRINDELIA.

Holm, Theo., describes and illustrates the structural characteristics of *Grindelia squarrosa* (Pursh) Dunal.—Merck's Rep. 1910, v. 19, pp. 310–312.

LaWall and Bradshaw report finding 6.3 per cent ash in grindelia robusta.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

GUAIACOL.

Evans Sons, Lescher & Webb (Analytical Notes, 1910, p. 34) report that 4 samples of liquid guaiacol answering the usual tests had a specific gravity of from 1.116 to 1.120.

The Budapest Correspondent (Lancet 1910, v. 178, p. 961) notes that guaiacolum has been omitted from the Ph. Hung. III, having been replaced by the better preparation guaiacolum carbonicum, which is now made official.

Schaefer, George L., calls attention to the alkaloidal salts of guaiacol sulphonic acids and creosote-sulphonic acid.—J. Soc. Chem. Ind. 1910, v. 29, pp. 928–930. See also p. 1141.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 199–202) reviews several recent communications on the value of guaiacol and creosote preparations in pulmonary tuberculosis.

GUAIACOLIS CARBONAS.

Riedel's Berichte (1910, p. xxxi) presents a monograph giving the composition, properties and tests for guaiacol carbonate.

Eldred, Frank R., reports that 3 lots of guaiacol carbonate melted between 84° and 85.5°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 892.

GUAIACUM.

Tunmann, O., states that resin of guaiac is chiefly produced in the eastern portion of the island of Haiti, being exported from Port au Prince and Gonaives.—Apoth. Ztg. 1910, v. 25, p. 556.

Rusby, H. H., asserts that guaiac is very prone to contain excessive amounts of wood and bark tissue and other impurities. He does not think it practicable to exclude all of this contamination, and suggests that the increase of the normal amount be checked by specifying the allowable limit of insoluble matter.—Drug. Circ. 1910, v. 54, p. 618.

The Committee of Reference in Pharmacy outlines tests for guaiac resin.—Brit. & Col. Drug. 1910, v. 58, p. 13.

Eldred, Frank R., reports that 27 lots of crude guaiac yielded from 0.2 per cent to 4 per cent of ash, and from 67 per cent to 99 per cent of alcohol-soluble material, only 5 lots contained more than 15 per cent of material insoluble in alcohol. Twenty lots of powdered guaiac resin yielded from 1 per cent to 30 per cent of ash, only 5 lots yielded more than 5 per cent. The amount of alcohol soluble material varied from 54 to 95 per cent, only four lots being above 85 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 892.

Gane, E. H., says that 1 sample of guaiac, a fine clear gum, was 98.65 per cent alcohol soluble and contained only a trace of ash.—*Ibid.*, p. 743.

Bernegau, L. H., reports that of 18 samples of guaiac examined, five exceeded the U. S. P. allowance of 15 per cent alcohol insoluble matter, testing respectively 18.2, 19-96, 21.17, 28.5 and 29.12 per cent. One of these samples also exceed the U. S. P. allowance for ash.—Proc. Pennsylvania Pharm. Ass., 1910, p. 138.

Beilstein, Christian, reports that 2 lots of guaiac resin contained 19 per cent and 23 per cent respectively of material insoluble in alcohol.—Proc. N. W. D. A. 1910, p. 106.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 10) report that the only sample of guaiac resin examined proved to be 88.6 per cent soluble in 90 per cent alcohol, and was free from colophony resin.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 34) report that 2 samples of guaiac resin yielded 2.2 and 5.5 per cent ash; 12.6 and 29.6 per cent dirt. They were soluble in 0.5 and 2.3 per cent petroleum ether; acid value (Dieterich) of alcohol soluble portion 66.2 and 58.8.

Havenhill, L. D., outlines modified formulas for tincture of guaiac and ammoniated tincture of guaiac.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 788.

Osborne, Oliver T., would eliminate from the Pharmacopœia, guaiac, its tincture and ammoniated tincture.—J. Am. M. Ass. 1910, v. 54, p. 468.

Krichbaum, P. A. (Medical Advance) points out that guaiacum is one of Hahnemann's antipsoric remedies, affecting every tissue of the body.—Hahnemann. Month. 1910, v. 45, p. 717.

GUARANA.

Marsden, P. H. (Ann. Trop. Med. & Parasit. 4, No. 1, June 1910, 105) states that the name of guarana is derived from a tribe of Indians in the Amazon basin, and is pronounced with the accent on the last syllable, much like Panamá.—Pharm. J. 1910, v. 31 (85), p. 577.

Schneider, Albert, states that guarana consists of masses of pasty starch; some sclerenchyma cells but no wood fiber.—Merck's Rep. 1910, v. 19, p. 191.

Wiley, H. W., reports that guarana continues to be of excellent quality.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

Dohme and Engelhardt state that the Ph. Hung. III directs that guarana contain 4 per cent of caffeine. The assay process is also given.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1184.

Goris and Fluteaux discuss the present state of our knowledge regarding the composition of guarana.—Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), pp. 151–153.

Scoville, W. L., thinks that the U. S. P. assay process for guarana is quite satisfactory. It can also be used for kola and its preparations.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 822.

Lyons, A. B., reports a comparison of the requirements and methods of assay for guarana included in the Ph. Helv. and the U. S. P.—Am. Druggist, 1910, v. 56, p. 102.

Clark, Albert H., reports that all samples of guarana examined were above 4.0 per cent alkaloidal principles.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 124.

Gane, E. H., reports the assay of 4 lots of guarana varying from 3.7 to 4.5 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 743.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 35) report that 1 sample of guarana tested contained 4.3 per cent of caffeine. Recent research work proves that some species of Paullinia yield an alkaloid which is not identical with either caffeine or theobromine.

HÆMATOXYLON.

The Committee of Reference in Pharmacy proposes a modified description for the Ph. Brit. hæmatoxyli lignum.—Brit. & Col. Drug. 1910, v. 58, pp. 13–14.

Tunmann, O., asserts that the consumption of hæmotoxylon has decreased materially. He enumerates the varieties of wood that occur on the market and presents tables showing the amount of wood and the amount of extract handled at the port of Hamburg.—Apoth. Ztg. 1910, v. 25, p. 557.

LaWall and Bradshaw report finding 4.1 per cent ash in hæmatoxylon.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

HAMAMELIDIS CORTEX.

The Committee of Reference in Pharmacy suggests the following description for hamamelidis cortex: "The transverse section exhibits under the microscope a cortex containing prismatic crystals of calcium oxalate, a complete ring of sclerenchymatous cells and numerous tangentially elongated groups of bast fibres."—Brit. & Col. Drug. 1910, v. 58, p. 14.

AQUA HAMAMELIDIS.

Eberle, E. G., thinks hamamelis water ought to be transferred to the N. F.; at least directions for making it should be omitted; few if any druggists make it. In the test the strength of solution of salicylic acid ought to be specified, say 1 gm. in 1000 cc.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 780.

LaWall, Charles H., reports that a test for the presence of methyl alcohol should be given among the requirements for witch hazel water, as it is frequently reported as containing this substance instead of ethyl alcohol.—Am. J. Pharm. 1910, v. 82, p. 21.

Sayre, L. E., reports on 1 sample of witch hazel: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.

Mains, S. L., reports that of 3 samples of extract of witch hazel examined 1, or 33⅓ per cent, was below standard.—Proc. Nebraska Pharm. Ass. 1910, p. 51.

Beal, George D., quotes from the last report of the Ohio Dairy and Food Department, 9 samples of extract of witch hazel examined, 4 passed, 5 failed.—Proc. Ohio Pharm. Ass. 1910, p. 73.

Harbert, J. P., has occasionally prescribed hamamelis internally in eye disturbances. It is of use in disorders resulting from traumatism and is especially valuable in hastening absorption of hæmorrhages. Hæmorrhages of conjunctiva clear up rapidly under its use, both locally and internally. It is an excellent remedy for enfeebled mucous membranes, its action being both tonic and astringent.—Eclectic M. J. 1910, v. 70, pp. 129–130.

HAMAMELIDIS FOLIA.

Schneider, Albert, states that hamamelis contains a few stellate trichomes; a few sclerenchyma cells in leaf parenchyma, like those of the tea-leaf. Prismatic crystals are abundant.—Merck's Rep. 1910, v. 19, p. 191

LaWall and Bradshaw report finding 5.55 per cent ash in witch hazel leaves.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Beilstein, Christian, reports that 1 lot of witch hazel leaves was found to consist of the leaves of an alnus (alder).—Proc. N. W. D. A. 1910, p. 106.

HEDEOMA.

LaWall and Bradshaw report finding 16.9 per cent ash in hedeoma herb.—Proc. Am. Pharm. Ass. 1910, v. 58. p. 753.

Osborne, Oliver T., thinks that pennyroyal and oil of pennyroyal should be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 377.

HEXAMETHYLENAMINA.

Hale, Worth, points out that hexamethylenamina U. S. P., under varying trade-names is available at from three cents to one dollar an ounce.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 11.

Menge, George A., in a study of melting point determinations reports on 6 samples of hexamethylenamine. This product was found to decompose below the melting point and was, therefore, not standardized. He points out that the U. S. P. states that hexamethylenamine sublimes, with partial decomposition and without melting, at 263°.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 90.

Riedel's Berichte (1910, p. xxxiii) presents a monograph giving the composition, properties and tests for hexamethylenetetramine.

Schmiz, Ed., describes a molecular combination of mercuric chloride with hexamethylenetetramine that may be developed into a quantitative test for one or the other constituent.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 201–202.

Schmid and Schröter report observations on the influence of the ingestion of urotropin on mother's milk.—Zentrlbl. Physiol. u. Path. d. Stffwchsls. 1910, v. 5, pp. 129–131.

Koldewijn, H. B., reviews some of the literature relating to the occurrence of hexamethylenamine in the milk of animals and reports experiments showing that this drug is thus eliminated.—Arch. Pharm. 1910, v. 248, p. 638.

Brady, William, notes that hexamethylenamine is eliminated in the cerebrospinal fluid half an hour after administration in sufficient amount to inhibit staphylococcus growth.—N. York M. J. 1910, v. 91, p. 212.

Bagby, B. B., reports remarkable results from the use of hexamethylenamine in pellagra.—J. Am. M. Ass. 1910, v. 55, p. 1663. See also p. 1828.

Davenport, H. I., notes that the administration of hexamethylenamine may obtund the tests for indican, due probably to the influence of formaldehyde in the drug.—*Ibid.* p. 856.

Jordan, Anson, in a study on the action of urinary antiseptics, reports observations on the antiseptic effect of hexamethylenetetramine. He concludes that urotropin acts as an urinary antiseptic by the formation of formaldehyde.—Biochem. J. 1910, v. 5, pp. 279–285.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, p. 367) calls attention to a contribution by Hilbert (Münch. med. Woch. 1910, No. 28) on the occurrence of a rash following the administration of urotropin.

For additional references on the pharmacology and uses hexamethylenamine see Zentrlbl. Biochem. u. Biophysik., J. Am. M. Ass. and Index Medicus.

HOMATROPINÆ HYDROBROMIDUM.

Menge, George A., in a study of melting point determinations reports on 5 samples of homatropine hydrobromide which were found to melt at from 211.4° to 214.5°, corrected.—Bull. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 90. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1043.

Cohn, Georg, discusses the chemistry of homatropine.—Pharm. Zentralh. 1910, v. 51, p. 369.

HUMULUS.

Skinner, Robert P., discusses the hop trade in Germany with statistics of crops and imports.—Cons. & Tr. Rep. June 25, 1910, pp. 774–776.

Rusby, H. H., asserts that the practice of removing a large part of the lupulin from hops and then selling the latter as genuine is very common and cannot be too heartily condemned. While this is forbidden by the present definition, no adequate provision is made for its detection.—Drug. Circ. 1910, v. 54, p. 617.

A. Boake, Roberts and Co., Ltd., Stratford, and A. E. Berry, Snaresbrook, Essex, in English patent 21,685, September 23, 1909, outline a method for bleaching and fumigating hops by subjecting them to the bleaching action of pure cold sulphur dioxide, which is liberated from previously prepared and liquefied gas.—J. Soc. Chem. Ind. 1910, v. 29, p. 1174.

HYDRARGYRI CHLORIDUM CORROSIVUM.

The Committee of Reference in Pharmacy thinks that this salt should be required to contain at least 98.6 per cent of $HgCl_2$. The solubility should be given as 1 in 18 of water and 1 in 4 of alcohol (90 per cent). The other solubilities should be omitted.—Brit. & Col. Drug. 1910, v. 58, p. 14.

Dohme and Engelhardt outline the Ph. Hung. III tests for corrosive mercuric chloride.—Proc. Am. Pharm. Ass. 1910, v. 58, p.1185.

Rupp and Klee outline the making of corrosive mercuric chloride from mercuric sulphate and sodium chloride by the wet method.—Apoth. Ztg. 1910, v. 25, p. 219.

Eldred, Frank R., reports that 44 lots of mercuric chloride varied from almost complete solubility in water to 1.1 per cent insoluble residue. The residue insoluble in water exceeded the official limit in only four lots.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 892.

Foote, H. W., reports an investigation to determine the influence of various organic solvents on the formation of certain double salts and reports on the compound formed by mercuric chloride with sodium or potassium chloride in alcohol or acetone.—J. Am. Chem. Soc. 1910, v. 32, pp. 618–622.

Schmiz, Ed., describes a reaction of hexamethylenetetramine with mercuric chloride in dilute solutions. The resulting precipitate is only slightly soluble in water but is readily dissolved by a solution of ammonium chloride.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 201–202.

Maurel and Arnaud compare the doses of mercuric bichloride which will produce diarrhœa in the rabbit with those which will render the urine albuminous.—Compt. rend. Soc. Biol. 1910, v. 68, p. 675. See also pp. 129, 170, 414, 608, 675, and Maurel, E., p. 1046; v. 69, p. 5.

McClintic, Thomas B., discusses the use of mercuric chloride as a disinfectant.—Public Health Bulletin No. 42, 1910, Washington, 1911, pp. 17–19.

Franz, Fr., presents a compilation of the cases of poisoning by corrosive sublimate, more particularly tablets of corrosive sublimate, during the years 1897–1905.—Arb. a. d. k. Gsndhtsamte. 1910, v. 34, pp. 1–16.

For reports of additional cases see J. Am. M. Ass. 1910, v. 54, p. 1203, 1459, 1867, 2056, and Boston M. & S. J. 1910, v. 162, pp. 138, 139.

Thibboneau urges that toxic solutions be always colored, the same color at all times and in proportion to the quantity of the active product.—Bull. sc. pharmacol. 1910, v. 17, Annexe, p. 225.

For additional references on the chemistry, pharmacology toxicology and uses of corrosive mercuric chloride see Chem. Abstr., Zentrlbl. Biochem. u. Biophysik., J. Am. M. Ass., and Index Medicus.

HYDRARGYRI CHLORIDUM MITE.

Riedel's Berichte (1910, p. xxviii) points out that the Ph. Germ. requirement that an alcoholic extract of mild mercurous chloride should not react with silver nitrate solution is not attainable. A slight reaction should be permitted.

The Committee of Reference in Pharmacy points out that when mercurous chloride is shaken with water and then filtered the filtrate should not be darkened by hydrogen sulphide, showing absence of more than traces of mercuric chloride. It should be required to contain at least 99.3 per cent of HgCl, corresponding to the lower official limit of mercury.—Brit. & Col. Drug. 1910, v. 58, p. 14.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 48) report that 6 samples of mercurous chloride contained 83 to 84 per cent of mercury.

Smith and Menzies report a quantitative study of the constitution of calomel vapor.—J. Am. Chem. Soc., 1910, v. 32, pp. 1541–1555.

Smith, Alexander, discusses the question: does calomel furnish another contradiction of the theory of heterogeneous dissociation equilibrium.—J. Am. Chem. Soc. 1910, v. 32, pp. 187–189.

Hemm, Francis, points out some of the reasons for dispensing calomel and soda in fresh mixture.—Proc. Missouri Pharm. Ass. 1910, pp. 73–75.

Schaefer, Theodore W., reports an experimental study of the supposed incompatibility of calomel with the gastric juice, alkaline chlorides and the vegetable acids.—Merck's Rep. 1910, v. 19, pp. 123–125; 153–155

An editorial (Critic and Guide, 1910, v. 13, p. 117) discusses the reaction which takes place when calomel is triturated with antipyrine and sodium bicarbonate. See also *Ibid.* p. 135 for discussion of incompatibilities.

Federici, Epaminonda, controverts the idea that salt must be withheld from the diet when administering calomel.—Boll. chim. farm. 1910, v. 49, p. 169. See also Pollacci, Egidio, *Ibid.* pp. 273–285; Celli, Dante, *Ibid.* p. 384; Riccardelli, Roberto, *Ibid.* p. 960.

Brady, William, notes that calomel acts in 10 to 12 hours. It is suitable for use at bed time.—N. York M. J. 1910, v. 91, p. 212.

Barton, Wilfred M., thinks the classic idea that calomel acts as a cholagogue is not entitled to credence.—J. Am. M. Ass. 1910, v. 55, p. 286.

For additional references on the chemistry, pharmacology and uses of mild mercurous chloride see Chem. Abstr., Zentrlbl. Biochem. u Biophysik., J. A. M. Ass. and Index Medicus.

HYDRARGYRI IODIDUM FLAVUM.

The Budapest Correspondent (Lancet 1910, v. 178, p. 961) states that hydrargyrum iodatum flavum has been omitted from the Ph. Hung. III because nobody prescribes it.

HYDRARGYRI IODIDUM RUBRUM.

The Committee of Reference in Pharmacy thinks that hydrargyri iodidum rubrum should be required to contain at least 98.7 per cent of mercuric iodide, corresponding to the lower limit of the yield of mercury at present required.—Brit. & Col. Drug. 1910, v. 58, p. 14.

Seidell and Wilbert discuss the purity rubric for red mercuric iodide and outline an assay method.—Am. J. Pharm. 1910, v. 82, p. 64.

Dunning, H. A. B., presents a formula for a solution of mercury biniodide in oil.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1123–1124.

Camus, E., suggests certain modifications of the Codex directions for the oil of mercuric iodide.—Bull. pharm. sud-est, 1910, v. 15, p. 340.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 210–212) calls attention to a paper by von Ammon on the use of ointments of mercuric iodide in the eye.

HYDRARGYRI OXIDUM FLAVUM.

The Committee of Reference in Pharmacy expresses the belief that yellow mercuric oxide should be required to contain at least 99.3 per cent of mercuric oxide, corresponding to the lower limit of mercury at present official. To exclude carelessly washed oxide the non-volatile residue should not exceed 0.5 per cent.—Brit. & Col. Drug. 1910, v. 58, p. 14.

Rosengarten, George D., states that criticism has been made that yellow mercury oxide contained red oxide, because it is not entirely converted into white mercuric oxalate when digested on the water bath with oxalic acid for 15 minutes.—Am. J. Pharm. 1910, v. 82, p. 31.

North, H. B., discusses the action of thionyl and sulphuryl chlorides on mercury and mercuric oxide.—J. Am. Chem. Soc. 1910, v. 32, pp. 184–187.

Koch, William J., thinks that the yellow oxide of mercury ointment should be reduced from 10 per cent to 2 per cent, as it is only prescribed as a 2 per cent salve for application to the eyes.—Am. Druggist, 1910, v. 56, p. 239. See also Thome, E. R., Practical Druggist, 1910, v. 28, p. 123.

Mittelbach, Wm., does not see the wisdom of having ointments of both oxides of mercury official.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 793.

Lepeytre (Bull. pharm. Lyon, 1910, No. 11) asserts that if the yellow oxide be pure, properly prepared and neutral, as tested by phenolphthalein, the ointment made therefrom will not prove painful.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 366.

HYDRARGYRI OXIDUM RUBRUM.

The Committee of Reference in Pharmacy points out that the non-volatile residue should not exceed 0.3 per cent.—Brit. & Col. Drug. 1910, v. 58, p. 14.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 29) have had occasion to reject parcels of red mercuric oxide on account of the presence of nitrates.

HYDRARGYRI SALICYLAS.

Riedel's Berichte (1910, p. xxviii) suggests that a slight reddish color due to the presence of traces of iron should be permitted in mercuric salicylate.

HYDRARGYRUM.

Moore, C. J., describes and illustrates an apparatus for the purification of mercury.—J. Am. Chem. Soc. 1910, v. 32, pp. 971–972. Also Chem. Ztg. 1910, v. 34, p. 735.

Easley, C. W., reports on the atomic weight of mercury.—J. Am. Chem. Soc. 1910, v. 32, pp. 1117–1126. See also Chem. News, 1910, v. 102, pp. 231–233, 235–236.

Smith and Menzies report a redetermination of the vapor pressure of mercury from 250° to 435°.—J. Am. Chem. Soc. 1910, v. 32, pp. 1434–1459.

Murray, B. L., discusses the determination of mercury in the mercury salts of the Pharmacopœia by first converting into mercuric nitrate and then subjecting to electrolysis.—J. Ind. & Eng. Chem. 1910, v. 2, p. 481.

Puckner and Hilpert discuss the estimation of mercury in organic compounds.—J. Am. M. Ass. 1910, v. 54, p. 1154. Also Rep. Chem. Lab. Am. M. Ass. 1910, v. 3, pp. 24–26, 48.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 48) report that 2 samples of mercury out of 5 offered failed to pass the U. S. P. thiosulphate test, other metallic impurities being present in excessive amounts.

For official preparations of mercury see this Bulletin under the several headings.

Dulière, W., submits some new observations on grey oil.—Ann. pharm. Louvain, 1910, v. 16, p. 49.

Deguy suggests the preparation of grey oil with silver amalgam.—Rép. pharm. 1910, v. 22, p. 20.

Kilmer, Frederick B., outlines a method for the assay of mercurial plaster.—J. Ind. & Eng. Chem. 1910, v. 2, p. 96. Also Am. J. Pharm. 1910, v. 82, p. 116.

Dohme and Engelhardt state that the Ph. Hung. III directs that mercurial plaster be made with wool-fat and diachylon ointment and should contain 20 per cent of mercury.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1177.

Osborne, Oliver T., thinks that mercurial plaster is unnecessary; also that the 15 salts of mercury are not all necessary.—J. Am. M. Ass. 1910, v. 54, p. 469.

Lecco, Marco T., discusses the detection of mercury and combinations of mercury in cases of poisoning and points out the need for including mercury in the class of volatile poisons.—Ztschr. analyt. Chem. 1910, v. 49, pp. 283–284.

Koldewijn, H. B., reviews the literature relating to the elimination of mercury in milk and reports a number of experiments with cows. He was unable to demonstrate the presence of mercury either in the milk or the urine of animals treated externally with mercurial ointment and receiving calomel internally.—Arch. Pharm. 1910, v. 248, pp. 625–626.

Izar, Guido, discusses the influence of several combinations of mercury on metabolism.—Biochem. Ztschr. 1909, v. 22, pp. 371–393.

Gundelach, W. J., believes mercury is almost a specific remedy for acute syphilis, consequently he gives mercury in material doses in those cases in which he wants a quick effect.—J. Am. Inst. Homœop. 1910, v. 2, p. 155.

A number of references on mercury and the compounds of mercury, their pharmacology, uses and toxicology, will be found in the J. Am. M. Ass. and Index Medicus.

HYDRARGYRUM AMMONIATUM.

The Committee of Reference in Pharmacy thinks that the chemical formula should be omitted. As prolonged washing decomposes the product, the amount of washwater should be specified; that ordered in the U. S. P. has been confirmed and should be adopted. Ammoniated mercury should be dried at a temperature not exceeding 30°, and should contain at least 77 per cent of mercury.—Brit. & Col. Drug. 1910, v. 58, p. 14.

Riedel's Berichte (1910, p. xxviii) points out that the solubility test with acetic acid must be conducted in such a way as to avoid the precipitation of calomel.

HYDRARGYRUM CUM CRETÂ.

LaWall, Charles H., asserts that a purity rubric should be given, together with a process for estimating the amount of metallic mercury present in hydrargyrum cum cretâ.—Am. J. Pharm. 1910, v. 82, p. 22.

HYDRASTINA.

Menge, George A., in a study of melting point determinations, reports that hydrastine requires further investigation because of striking contrast in the behavior of different samples of pharmacopœial standard. Only one of the five samples examined melted completely at the temperature prescribed by the U. S. P.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 91.

Cohn, Georg, discusses the chemistry of hydrastine and some of its derivatives.—Pharm. Zentralh. 1910, v. 51, pp. 398–399.

Rabe and McMillan present a contribution on the chemistry of narcotine and hydrastine and show the relation of their derivatives.—Ann. Chem. 1910, v. 377, pp. 223–258.

Perkin and Robinson discuss the relations existing between berberine, corydaline and allied alkaloids and conclude that berberine and hydrastine are so closely related as to suggest that hydrastine is either formed in the plant from berberine or that they are derived from some common parent.—J. Chem. Soc., Lond., 1910, v. 97, pp. 318–323.

HYDRASTININÆ HYDROCHLORIDUM.

Rosenthaler and Görner, in discussing the use of aromatic nitro compounds as precipitants for alkaloids, report that hydrastinine yields handsome, characteristic crystals with trinitrophenol, trinitrocresol, trinitrothymol and trinitroresorcin.—Ztschr. anal. Chem. 1910, v. 49, p. 347.

Laidlaw, P. P., presents a note on the action of hydrastinine and cotarnine.—Brit. M. J. 1910, v. 2, p. 1599.

HYDRASTIS.

Tunmann, O., asserts that the territory producing hydrastis is now confined to Kentucky, Indiana, Ohio, West Virginia, and that the chief market for the drug is Cincinnati. The fall-dug drug is considered most desirable.—Apoth. Ztg. 1910, v. 25, p. 549.

An editorial (Pharm. J. 1910, v. 31 (85), p. 571), commenting on the high price of hydrastis rhizome, states that it is probably due to the destructive and wasteful mode of collecting.

Rusby, H. H., states that with the present high price of hydrastis, even a very small percentage of adulteration becomes highly profitable. The articles available for such use are not numerous, and should all be investigated for description in connection with the powdered drug.—Drug. Circ. 1910, v. 54, p. 618.

Schneider, Albert, calls attention to the structural characteristics of hydrastis and states that this drug is frequently adulterated with cereal, curcuma, coptis roots, etc.—Merck's Rep. 1910, v. 19, p. 191.

The Committee of Reference in Pharmacy points out that, as the liquid extract is to be standardized, no assay or ash limit appears necessary.—Brit. & Col. Drug. 1910, v. 58, p. 14.

Dohme and Engelhardt state that the Ph. Hung. III does not give an assay process for hydrastis.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1185.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 50) point out that the Ph. Germ. V requires that hydrastis contain at least 2.5 per cent of hydrastine. Fromme, in commenting on these requirements, expresses the belief that 2.5 per cent is abnormally low for present commercial conditions and that a drug assaying this amount of hydrastine will not yield a fluid extract containing 2.2 per cent, the minimum limit prescribed by the Ph. Germ. V.

LaWall and Bradshaw report finding 9.15 per cent ash in hydrastis.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Rabe and McMillan, in a contribution on the chemistry of narcotine and hydrastine, call attention to the relationship existing between the two alkaloids despite their widely varying origin.—Ann. Chem. 1910, v. 377, pp. 223–258. (See 378, 1.)

Lyons, A. B., thinks that hydrastis is a drug greatly overrated in value but one, which because of its high price, is a tempting subject for sophistication. He discusses the several methods of assay used and expresses the belief that the ether soluble alkaloid is sufficiently indicative of the quality of the sample examined.—Am. Druggist, 1910, v. 56, p. 43.

Scoville, W. L., thinks that in the U. S. P. assay of hydrastis too much drug is used. The alkaloids precipitated from 10 gm. come down in masses which the ether is unable to dissolve, even when used in large excess.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 822.

Elvove, Elias, in a report of further studies in the application of the Volhard method to the estimation of alkaloids, calls attention to the possibility of applying this method for the determination of hydrastine.—J. Am. Chem. Soc. 1910, v. 32, p. 138.

Rosenthaler and Görner, in discussing the use of aromatic nitroderivatives as precipitants for alkaloids, report that trinitrothymol and several analogous compounds are more sensitive for hydrastine than is picric acid.—Ztschr. anal. Chem. 1910, v. 49, p. 347.

Caesar & Loretz (Jahres-Ber. 1910, pp. 108–109) outline the Keller-Rusting-Fromme method of assay for *Hydrastis canadensis*, and call attention to the standards included in the several pharmacopœias.

Lyons, A. B., reports a comparison of the requirements and methods of assay for hydrastis included in the Ph. Helv. and the U. S. P.—Am. Druggist, 1910, v. 56, p. 102.

Table showing reported variation in hydrastine content.

Reporters.	Number of samples.	Minimum.	Maximum.	References.
Clark, Albert H.	30	2.5	4.5	Bull. Am. Pharm. Ass. 1910, v. 5, p. 124.
Eldred, Frank R. (1908)	19	2.8	3.8	Proc. Am. Pharm. Ass. 1910, v. 58, p. 892.
Eldred, Frank R. (1909)	20	2.8	4.9	
Gane, E. H.	2	2.7	3.1	*Ibid.* p. 743.
Ladd, E. F.	17	1.7	5.8	Spec. Bull. Agric. Exper. Sta., North Dakota, 1910, v. 1, p. 254.
Vanderkleed, Chas. E.	12	2.6	5.33	Proc. Pennsylvania Pharm. Ass. 1910, p. 147.
Caesar & Loretz	?	2.63	4.06	Jahres-Ber. 1910, p. 50.

Beilstein, Christian, reports that 1 lot of drug offered as golden seal was *Solidago odora* (fragrant golden rod), and another lot was found to be twin leaf. Serpentaria was also found as an adulterant.—Proc. N. W. D. A. 1910, p. 105.

Sayre, L. E., reports on 23 samples of powdered hydrastis: all illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1096.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, pp. 31–32) point out that the Ph. Germ. has increased the requirement for hydrastine content of fluid extract of hydrastis from 2 to 2.2 per cent. They discuss the assay process which they think should be improved.

Dohme and Engelhardt outline the Ph. Hung. III method of making, also the tests and assay process for fluid extract of hydrastis.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1180.

The Committee of Reference in Pharmacy recommends that the menstruum for extractum hydrastis liquidum Ph. Brit. be 60 per cent alcohol instead of 45 per cent as at present. The preparation should be assayed, and for this purpose the process of the United States Pharmacopœia has been tested and found satisfactory.—Brit. & Col. Drug. 1910, v. 58, p. 12.

Caesar & Loretz (Jahres-Ber. 1910, pp. 71–72) comment on some of the recent work done on the determination of hydrastine, and point out that much of the available fluid extract of hydrastis precipitates badly, due no doubt to carelessness in preparation and the accompanying loss of alcohol.

They also (*Ibid.* pp. 91–92) outline the Keller-Rusting-Fromme method for the determination of hydrastine in fluid extract of hydrastis and present a table showing the requirements made for this preparation by the several pharmacopœias.

Derlin, L., discusses the assay methods for fluid extract of hydrastis.—Apoth. Ztg. 1910, v. 25, pp. 190–191; 201–202.

Fromme, G., comments on the article by Derlin.—*Ibid.* pp. 250–251. See also correction, p. 274 and continuation of controversy pp. 303 and 338.

Derlin, L., comments on the relation of extract content to alkaloid content in fluid extract of hydrastis.—Pharm. Ztg. 1910, v. 55, p. 244.

Jäggi presents a review of several recent papers on the determination of extract and of alkaloids in fluid extract of hydrastis.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 629–634, 650–656.

See also *Ibid.* pp. 36–38.

Sayre, L. E., reports on 4 samples of fluid extract of hydrastis: 1 passed; 3 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1096.

Knight, Henry G., reports the examination of 5 samples of fluid extract of hydrastis; 2 not passed.—Rep. Dairy, Food & Oil Com., Wyoming, 1910, p. 49.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 31) report the 2 per cent standard for hydrastine adopted by the United States Pharmacopœia to be fairly applicable to the British liquid extract of hydrastis.

Rippetoe, John R., thinks that the glycerite of hydrastis should have an alkaloidal standard and assay process for determining the same. The U. S. P. method for fluid extract of hydrastis is a satisfactory method.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1062. See also Thome, E. R.—Practical Druggist, 1910, v. 28, p. 122.

Havenhill, L. D., outlines a modified formula for making the tincture of hydrastis and suggests that this preparation should assay by the official process 0.4 gm. of hydrastine in each 100 cc.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 788.

Osborne, Oliver T., thinks that hydrastis has no wonderful peculiar healing properties as to the mucous membrane of the stomach. It is disagreeable to take, and has nothing to recommend it over other simpler and pleasanter treatments.—J. Am. M. Ass. 1910, v. 54, p. 209.

HYOSCINÆ HYDROBROMIDUM.

Schaefer, George L., recommends the use of 0.01 gm. hyoscine hydrobromide and 5 cc. of sulphuric acid as the proper proportion in applying the U. S. P. sulphuric acid test.—Am. J. Pharm. 1910, v. 82, p. 222.

Gifford, John H., reports a death from hyoscine-morphine anæsthesia.—Boston M. & S. J. 1910, v. 162, p. 139.

The Brit. M. J. (1910, v. 2, pp. 1372–1383) contains a special report of the medical evidence in a case of hyoscine poisoning.

HYOSCYAMINÆ HYDROBROMIDUM.

Menge, George A., in a study on melting point determinations, reports on 3 samples of hyoscyamine hydrobromide; 1 sample was found to melt at from 150.8° to 151.8°, corrected. Samples b and c, although labeled "hyoscyamine hydrobromide" and purchased at the same price as that paid for sample a, were brown, semiplastic, smeary products—impossible of investigation by a capillary-tube method and obviously below U. S. P. standard.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 91–92.

An unsigned abstract (Hom. Recorder) reports a case of subacute mania in a woman of 80 controlled in two days by hyoscyamine one-fiftieth grain dose every four hours.—J. Am. Inst. Homœop. 1910, v. 2, p. 418.

HYOSCYAMUS.

Chevalier, J., experimenting on the influence of cultivation on the alkaloidal content of some of the Solanaceæ, has obtained a lot of hyoscyamus yielding 0.286 per cent total alkaloids, as compared with 0.070 to 0.180.—Compt. rend. Acad. sc. 1910, v. 150, pp. 344–346.

Rusby, H. H., thinks that the portion of "top" permissible in henbane should be specified as not exceeding 3 inches in length.—Drug. Circ. 1910, v. 54, p. 617.

The Committee of Reference in Pharmacy thinks that it is desirable to restrict the drug to the biennial plant as at present, but foreign-grown biennial henbane should not be excluded.—Brit. & Col. Drug. 1910, v. 58, p. 14.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 35) point out that the Ph. Germ. now prescribes the leaves of hyoscyamus in place of the herb formerly official. The ash content is not to exceed 24 per cent and the hyoscyamine content should be at least 0.07 per cent. They think the latter requirement for a drug containing from 8 to 10 per cent of moisture is rather high.

Dohme and Engelhardt state that the Ph. Hung. III does not give an assay process for hyoscyamus leaves, the only requirement being that the leaf should yield on extracting with alcohol 18 per cent of extractive matter.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1185.

Rusby, H. H., discusses the official description of henbane, and expresses some doubt as to whether the theories involved are supported by evidence.—Drug. Circ. 1910, v. 54, p. 618.

Schneider, Albert, enumerates the microscopical characteristics of hydrastis leaves, and states that the drug may be adulterated with leaves of allied species. Stems and impurities are frequently excessive.—Merck's Rep. 1910, v. 19, p. 191.

Sievers, A. F., presents some practical suggestions on the assay of mydriatic alkaloids, the precautions to be observed, and discusses methods for avoiding some of the difficulties frequently encountered.—*Ibid.* p. 215.

Caesar & Loretz (Jahres-Ber. 1910, p. 98) recommend the Keller method of assay for belladonna as being applicable to hyoscyamus.

Lyons, A. B., reports a comparison of the requirements and methods of assay for hyoscyamus included in the Ph. Helv. and the U. S. P.—Am. Druggist, 1910, v. 56, p. 104.

Scoville, W. L., thinks that the U. S. P. method of assay for hyoscyamus is satisfactory when Mayer's reagent is carefully used to insure complete extraction.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 820. See also p. 879.

Table showing reported variations in alkaloidal content of hyoscyamus.

Reporter.	Number of samples.	Per cent of Mydriatic alkaloids.		References.
		Minimum.	Maximum.	
Beilstein, Abraham	(?)	0.026	0.081	Proc. N. W. D. A. 1910, p. 102.
Eldred, Frank R. (1908)	7	0.042	0.109	Proc. Am. Pharm. Ass. 1910, v. 58, p. 893.
Eldred, Frank R. (1909)	15	0.039	0.14	
Gane, E. H	5	0.044	0.074	*Ibid.* p. 754.
Patch, E. L	4	0.0505	0.086	*Ibid.* p. 744.
Pearson, W. A	4	0.04	0.046	Proc. Penn. Pharm. Ass. 1910, p. 138.
Vanderkleed, Chas. E	20	0.036	0.172	*Ibid.* p. 147.
Caesar & Loretz	(?)	0.045	0.060	Jahres-Ber. 1910, p. 35.

Wiley, H. W., reports that over 30 shipments of henbane entered, although many assay as high as 0.13 per cent, yet over 20 per cent are deficient in alkaloid, due to the excessive amount of sand mixed with the leaves.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

Engelhardt, Hermann, reports that one out of eleven samples of henbane assayed below the required strength.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1257.

Rusby, H. H., states that he has met with henbane leaves consisting wholly or partly of a different species and containing 12 times as much alkaloid as the genuine and this alkaloid of a different kind.—Practical Druggist, 1910, v. 27, p. 424.

Clark, Albert H., reports that all samples of hyoscyamus except one have been above the standard of 0.08 per cent alkaloids.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 124.

Sayre, L. E., reports on 21 samples of hyoscyamus: 15 passed; 6 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1096.

Rusby, H. H., states that henbane is very frequently contaminated with 25 per cent or more of sand and is ground in this condition.—Drug. Circ. 1910, v. 54, p. 7. Also Proc. Am. Pharm. Ass. 1910, v. 58, p. 755.

Francis, J. M., states that the adulteration of hyoscyamus with the leaves of stramonium and similar plants is still practiced to a certain extent.—Proc. Pennsylvania Pharm. Ass. 1910, p. 136.

Dohme and Engelhardt state that the Ph. Hung. III directs that extract of hyoscyamus should not contain more than 10 per cent of water. No assay process is given for this extract, but a reaction for identification is included.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1181.

Sayre, L. E., reports on 1 sample of powdered extract of hyoscyamus: illegal.—*Ibid.* p. 1096.

Havenhill, L. D., outlines a modified formula for making tincture of hyoscyamus and suggests that this preparation should assay by the official process 0.007 gm. of the alkaloids of hyoscyamus in each 100 cc.—*Ibid.* p. 788.

Hommell, Philemon E., thinks the precipitate found in tincture of hyoscyamus should be avoided.—Merck's Rep. 1910, v. 19, p. 122.

Pollard, J. W., reports examining 10 samples of tincture of hyoscyamus. The extractive varied from 1.04 to 4.27 per cent and the percentage of alcohol from 23.9 to 40.3.—Proc. Massachusetts Pharm. Ass. 1910, p. 160.

INFUSA.

Dohme and Engelhardt state that the Ph. Hung. III directs that infusions be made by mixing the drug with the prescribed amount of cold distilled water and exposing this mixture to live steam for five minutes. After cooling the liquid is filtered.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1176–1177.

Wulff, C., points out that the Ph. Ital. III absolutely forbids the use of so-called dried decoctions or infusions; also forbids the substitution of decoctions or infusions made from fluid extracts.—Apoth. Ztg. 1910, v. 25, p. 908.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 39) point out that the Ph. Germ. V requires that infusions be freshly prepared and that the drug be expressed on cooling.

Bulnheim thinks that the general formula for infusions in the Ph. Germ. while fairly satisfactory could still be improved upon. He thinks infusions and decoctions could be readily united under one heading.—Pharm. Ztg. 1910, v. 55, p. 325.

"J. M." discusses the permissibility of developing a line of concentrated infusions and presents a number of formulas.—Pharm. Post, 1910, v. 43, pp. 245–246.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, p. 220) presents a definition for infusions and discusses the method of making them.

Hemm, Francis, asserts that ready made infusions are generally conceded to be ill adapted for stock goods and have always stood condemned.—Proc. Missouri Pharm. Ass. 1910, p. 75.

IODOFORMUM.

Menge, George A., in a study of melting point determinations reports that iodoform decomposes at the melting point and therefore requires further investigation.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 92.

Riedel's Berichte (1910, p. xxviii) points out that iodoform is soluble in 6 parts of ether only at about 20°. At lower temperatures it is less soluble.

Clark, A. H., discusses the assay of iodoform and of iodoform gauze.—Am. J. Pharm. 1910, v. 82, pp. 451–453.

Paolini, V. (Chim. farm. v. 4, p. 36) submits a process for the estimation of iodoform in iodoform gauze which gives very exact results.—Nouv. remèdes, 1910, v. 26, p. 111.

Cohn, Georg, discusses the chemistry of iodoform and a number of combinations of iodoform with bases.—Pharm. Zentralh. 1910, v. 51, pp. 145–150. Also Pharm. Post, 1910, v. 43, pp. 573–574.

Koch, William J., asserts that for ointment of iodoform an ointment base consisting of 1 part hydrous wool-fat, and 3 parts petrolatum will make a nice smooth, absorbent ointment.—Am. Druggist, 1910, v. 56, p. 239.

Mittelbach, Wm., reports that the ointment of iodoform is all right providing it is made up fresh when dispensed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 792.

Osborne, Oliver T., says that the only excuse for the use of iodoform seems to be in an oil emulsion as an injection into tuberculous joints or tendons. In such use there is no obnoxious odor exuded or wafted about by the patient.—J. Am. M. Ass. 1910, v. 54, p. 51.

Short, A. R. (Med. Press & Circ., September 21, 1910) reports a case in which symptoms of thyroidism seem to have been produced by a moderate application of iodoform to an external wound.—*Ibid.* p. 1505.

Moleschott (Am. J. Clin. Med.) reports on the use of iodoform in organic affections of the heart, especially in the asystolic period of mitral insufficiency.—Therapist, Lond., 1910, v. 20, p. 128.

IODUM.

Baxter, Gregory Paul, in a contribution on the revision of the atomic weights of silver and iodine, presents observations on the ratio of silver to iodine.—J. Am. Chem. Soc. 1910, v. 32, pp. 1591–1602.

Erdmann, Ernst, reports a study to determine the occurrence of iodine in salt minerals, and presents tables showing the amount of iodine found in the several minerals examined.—Ztschr. ang. Chem. 1910, v. 23, pp. 342–347.

Dohme and Engelhardt state that the Ph. Hung. III directs that iodine be 99 per cent pure and free from iron.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1185.

The Committee of Reference in Pharmacy thinks that iodine should be required to contain at least 99 per cent of pure iodine. The volumetric process should be omitted.—Brit. & Col. Drug. 1910, v. 58, p. 14.

Siegrist, H., discusses the chemistry of some of the derivatives of iodine.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 183–187; 198–203.

Mascarelli, Luigi, discusses the chemistry of ring compounds with polyvalent iodine.—Chem. Ztg. 1910, v. 34, p. 9.

Dibdin, W. J., outlines a method for the colorimetric estimation of iodine in the presence of bromides and chlorides.—Analyst, London, 1910, v. 35, p. 160.

Paolini, Vincenzo, presents a new method for the detection and estimation of iodine in organic substances; estimation in gauze.—Arch. farmacol. sper. 1910, v. 9, pp. 260–261.

Bray, W. C., reports observations on the hydrolysis of iodine and of bromine.—J. Am. Chem. Soc. 1910, v. 32, pp. 932–936.

Casanova, Carlo, presents a note on the behavior of iodine with terpene hydrate, with eucalyptol and with terpinol.—Boll. chim. farm. 1910, v. 49, pp. 957–960.

Amann reports observations in connection with ultramicroscopic studies of solutions of iodine.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 275–280.

Scott, James, describes and illustrates the micro-crystalline structure of iodine.—Chem. Trade J. Lond. 1910, v. 46, p. 268.

Bachman, G., reports that the iodine examined showed a minimum percentage of 96.9, a maximum of 99.17.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Eldred, Frank R., reports that a large number of lots of iodine were examined. They contained from 98.3 to 99.9 per cent of iodine.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 893.

Bernegau, L. H., reports that of 18 lots of iodine examined only one ran a trifle below the U. S. P. standard of 99 per cent. Eleven samples ran from 99.8 to 99.93 per cent pure, and five ranged from 99 to 99.7 per cent pure.—Proc. Pennsylvania Pharm. Ass. 1910, p. 138.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 36) report that they have again found it necessary to reject commercial samples of iodine containing sometimes as much as 0.4 per cent of lead.

Brown, Linwood A., asserts that there is hardly a preparation in the Pharmacopœia which varies so much as tincture of iodine. This variation, he believes to be due to: (1) carelessness in preparing; and (2) carelessness in storing and keeping.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 163.

Havenhill, L. D., is not prepared to say that the tincture of iodine had been improved from the standpoint of efficiency. He thinks it is unquestionably more permanent than the former tincture.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 782.

Eberle, E. G., thinks that the amount of potassium iodide in tincture of iodine ought to be reduced.—*Ibid.* p. 781.

Weinstein, Abraham, thinks that the popularity of tincture of iodine with the public demands that it should be reduced to one-half the present strength.—*Ibid*, p. 1280.

Nitardy, F. W., recommends the use of 35 cc. of water in making 1000 cc. of tincture of iodine.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 375. See also Koch, William J., Am. Druggist, 1910, v. 56, p. 239, and Thome, E. R., Practical Druggist, 1910, v. 28, p. 123.

Hommell, Philemon E., thinks that the U. S. P. tincture of iodine is an annoyance to the pharmacist. The formula should be improved.—Merck's Rep. 1910, v. 19, p. 122.

Havenhill, L. D., outlines a modified formula for making the tincture of iodine.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 788. See also Hartz and McElhenie, *Ibid.* pp. 1269–1270;

Courtot, and others, discuss alterations in tincture of iodine.—J. pharm. et chim. 1910, v. 1, pp. 297–301, 354–359, 439, 545; v. 2, pp. 344–350.

LaWall, Charles H., thinks that a purity rubric for iodine and potassium iodide is necessary in tincture of iodine. A method for the determination of alcohol, also for the detection of wood alcohol, should be given. He presents a method for the determination of potassium iodide.—Am. J. Pharm. 1910, v. 82, p. 26.

Seidell and Wilbert discuss the assay of tincture of iodine and suggest the use of an iodate titration method.—Am. J. Pharm. 1910, v. 82, p. 65.

Blarez, Ch., presents a paper on the practical assay of tincture of iodine.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 106–109.

Ribaut, H., criticizes the Ph. Fr. V method for the assay of tincture of iodine and suggests another version; he also criticizes the requirements as to preservation.—Bull. sc. pharmacol. 1910, v. 17, pp. 270–272.

Denigès, G., presents a note on the detection of denatured alcohol in tincture of iodine.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, p. 149.

Table showing some of the analytical results reported for tincture of iodine.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Wulling, Frederick J	5	1	Northwestern Druggist, 1910, v. 11, Sept., p. 25.
Sayre, L. E	424	208	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1096.
Hill, Edward C	1	1	Bull. Colorado Bd. Health, 1910, v. 10, No. 1, p. 10.
Potter, Hubert F	6	2	Rep. Connecticut Dairy and Food Com., 1910, Hartford, 1911, p. 133.
Connecticut Agri. Exper. Station.	49	17	Proc. Am. Pharm. Ass. 1910, v. 58, p. 744.
Hudson, T. G	170	103	Bull. Georgia Dept. Agric. 1910, No. 51, pp. 137–142.
Havenhill, L. D	398	160	Proc. Kansas Pharm. Ass. 1910, p. 57.
Lythgoe, Hermann C	123	9	Rep. Massachusetts Bd. Health, 1910, pp. 369–370.
Bachman, G	5	1	Proc. Minnesota Pharm. Ass. 1910, p. 64.
Mains, S. L	12	5	Proc. Nebraska Pharm. Ass. 1910, p. 51.
Howard, Charles D	15	8	Rep. New Hampshire Bd. Health, 1910, v. 21 p. 205.
Arny, H. V	17	6	Proc. Ohio Pharm. Ass. 1910, p. 69.
Beal, George D	32	23	*Ibid.* p. 73.
Brown, Lucius P	132	106	Bull. No. 3, Tennessee Food and Drugs Insp. 1910, p. 30.
Maiden, Warren A	26	10	Proc. Virginia Pharm. Ass. 1910, pp. 106–110.
Knight, Henry G	3	1	Rep. Dairy, Food & Oil Com., Wyoming, 1910, p. 53.
Local Government Board	50	7	Pharm. J. 1910, v. 30 (84), p. 33.

Porter, C. S., reports that tinctures of iodine have been found to range as low as 30 per cent of the required U. S. P. strength and to contain no potassium iodide.—Proc. Kentucky Pharm. Ass. 1910, p. 46.

Sayre, L. E., reports that over 60 per cent of the tincture of iodine samples secured from druggists all over the state by the drug inspectors of the State Board of Health have been found to be adulterated by being substandard in strength, or differing in composition from the U. S. P.—Bull. Kansas Bd. Health, 1910, v. 6, p. 15.

Bachman, G., reports that three samples of compound solution of iodine examined showed a minimum percentage of 2.32, a maximum of 4.56.—Proc. Minnesota Pharm. Ass. 1910, p. 64. See also Northwestern Druggist, 1910, v. 11, Sept., p. 25.

Mittelbach, Wm., reports that the use of glycerin in iodine ointment is not necessary and should be omitted.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 792.

Koch, William J., asserts that in iodine ointment, an ointment base consisting of 1 part hydrous wool-fat, and 3 parts petrolatum will make a nice smooth, absorbent ointment.—Am. Druggist, 1910, v. 56, p. 239.

Sayre, L. E., reports on 2 samples of iodine ointment: both illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1096.

Woodbury, Frank T., contributes a note on iodine, the ideal surgical antiseptic.—N. York M. J. 1910, v. 92, p. 1105.

Bauman, Eugene, claims priority.—*Ibid.* p. 1309.

Brown, W. H., asserts that tincture of iodine produces absolute asepsis of the skin in 3 minutes, and penetrates deeply, sterilizing the entire depth of the epithelium. The bactericidal power is due to the iodine *per se* and not to the alcohol. Skin changes are not of serious import.—J. Am. M. Ass. 1910, v. 55, p. 343.

Stretton, J. Lionel, makes a further contribution on the sterilization of the skin of operation areas by iodine, with tabulated statement of results.—Brit. M. J. 1910, v. 1, p. 1350.

Waterhouse and Fenwick contribute two notes on sterilization of the skin by the use of an alcoholic solution of iodine.—Lancet 1910, v. 178, p. 1063. See also p. 1167.

An editorial (Am. Vet. Rev. 1909–10, v. 36, pp. 8–11) discusses the use of iodine as a cutaneous antiseptic and outlines indications for its use.

Dickie, William S., discusses dry iodine catgut and summarizes his experience.—Brit. M. J. 1910, v. 1, p. 134. See also pp. 175, 234.

Harnack, Erich, presents a contribution on iodine elimination and on the supposed origin of organic iodine compounds from the iodides in the urine.—Arch. internat. pharmacodyn. et thérap. 1910, v. 20, pp. 247–264.

Salisbury, J. H., discusses the pharmacology of iodine and the iodides.—J. Am. M. Ass. 1910, v. 54, p. 1935.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 219–223) reviews a number of papers on the use of iodine, more particularly the use of iodine as a method of disinfecting the skin before operations.

For additional references on the chemistry, pharmacology and uses of iodine see Chem. Abstr., Zentrlbl. Biochem. u. Biophysik., J. Am. M. Ass., and Index Medicus.

IPECACUANHA.

Tunmann, O., asserts that the chief market for ipecac is London. The drug occurs in 3 varieties: Rio, Carthagena and East Indian or Johore, the latter being the equal of the Brazil or Rio variety. He points out that the production and consumption of this drug has materially decreased in the past 20 years, and presents tables showing the amount of drug offered on the London market during the years 1904–1909 and the amount imported into the port of Hamburg during the years 1897–1908.—Apoth. Ztg. 1910, v. 25, pp. 453–454.

An editorial (Pharm. J. 1910, v. 31 (85), p. 601) commenting on the high price of ipecac, refers to the different sources of this product.

Dohme and Engelhardt state that the Ph. Hung. III requires that ipecac root should contain 2 per cent of total alkaloids, determined by the method given.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1185.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 46) point out that the Ph. Germ. V recognizes only the best varieties of Rio ipecac. The alkaloid content is fixed at a minimum of 1.99 per cent.

The Committee of Reference in Pharmacy proposes a modified monograph for ipecacuanhæ radix which they define as the dried root of *Psychotria ipecacuanha* Stokes. It should afford not more than 4 per cent of ash, and should yield at least 2 per cent of alkaloids when tested by the process outlined.—Brit. & Col. Drug, 1910, v. 58, p. 14.

LaWall and Bradshaw report finding 2.7 and 3.0 per cent ash in ipecac.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Schneider, Albert, states that the general histological characteristics of the two official ipecacs are similar, though the starch granules differ considerably in size. The drug is quite frequently adulterated with foreign roots and with roots of related plants, excess of stems, clay, dirt, infusorial earth, cereal, etc.—Merck's Rep. 1910, v. 19, p. 191.

Rusby, H. H., states that under a definition that specified the root only, every shipment would violate the law, for the reason that it is not practicable to collect ipecac entirely free from stem.—Drug. Circ. 1910, v. 54, p. 616.

Wiley, H. W., reports that ipecac continues to be of excellent quality.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

Dohme, A. R. L., expresses the belief that if the Pharmacopœia has admitted that the standard of ipecac should be 1.75, it would be dangerous to permit the use indiscriminately of an ipecac 50 per cent stronger than that, without dilution, and therefore this dilution should not be considered an adulteration, but a compliance or a bringing of that drug down to the standard of the Pharamacopœia.—Proc. Maryland Pharm. Ass. 1910, p. 124.

Lyons, A. B., discusses the assay of ipecac, reviews the several methods proposed or used and expresses the belief that ipecacuanha is a drug which certainly should be guarded by assay requirements.—Am. Druggist, 1910, v. 56, pp. 43–44.

Rosenthaler and Görner, in discussing the use of aromatic nitro-compounds as precipitants for alkaloids, report that trinitrothymol is more sensitive than picric acid as a reagent for emetine.—Ztschr. anal. Chem. 1910, v. 49, p. 345.

Scoville, W. L., thinks that for the U. S. P. assay of ipecac too much drug is used. The alkaloidal residue from 10 gm. of drug, or 10 cc. of fluid extract, is so highly colored that titration is very difficult.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 822.

Kebler, Lyman F., in a review of the present status of drug assays, points out that in the case of ipecac one set of workers reported results which very nearly came within a 5 per cent variation. In another set of results, however, the variation amounted to approximately 10 per cent.—*Ibid.* p. 858.

Hoover, G. W., notes that a review of the co-operative work done in connection with the assay of drugs shows a variation of 10 per cent of alkaloids in ipecac based on the amount present as 100 per cent.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 182. (Bull. Bur. Chem., U. S. Dept. Agric. 1911, No. 137.)

Caesar & Loretz (Jahres-Ber. 1910, pp. 104–106) outline the Panchaud method of assay for ipecac, and call attention to the standard for alkaloidal content of this drug included in the several pharmacopœias.

Lyons, A. B., reports a comparison of the requirements and methods of assay for ipecac included in the various pharmacopœias.—Am. Druggist, 1910, v. 56, p. 104.

Table showing reported variations in alkaloidal content of ipecac:

Reporters.	Number of samples.	Per cent of mydriatic alkaloids.		References.
		Minimum.	Maximum.	
Clark, Albert H	11	1.75	2.00	Bull. Am. Pharm. Ass. 1910, v. 5, p. 124.
Evans Sons Lescher & Webb.	2	1.8	1.82	Analytical Notes, 1910, p. 36.
Gane, E. H	4	1.05	2.22	Proc. Am. Pharm. Ass. 1910, v. 58, p. 744.
Goeckel, Henry J	8	1.266	2.1	*Ibid.* p. 1048.
Patch, E. L	8	1.97	2.4	*Ibid.* p. 744.
Southall Bros & Barclay	6	1.88	2.43	Rep. 1910, Birmingham, 1911, p. 10.
Vanderkleed, Chas. E	23	2.0	2.60	Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Kebler, L. F., reports finding a number of samples of powdered ipecac adulterated with powdered olive stones.—Proc. Maryland Pharm. Ass. 1910, p. 121.

Rusby, H. H., states that he has met with powdered ipecac consisting of about one-half ground olive pits; also powdered ipecac adulterated with various other substances.—Practical Druggist, 1910, v. 27, p. 423.

Engelhardt, Hermann, reports that ipecac has been of decidedly better quality than in previous years. Of 9 samples examined only one assayed slightly below 2 per cent of total alkaloids.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1257.

The Committee of Reference in Pharmacy submits a monograph for extractum ipecacuanhæ liquidum, to replace the one at present official. The alkaloidal content is given as 2 gm. of the alkaloids of ipecacuanha root in 100 cc.—Brit. & Col. Drug. 1910, v. 58, p. 12.

Dohme and Engelhardt state that the Ph. Hung. III directs that tincture of ipecac should contain 0.2 per cent of total alkaloids.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1193.

Beringer, George M., states that the majority of the pharmacopœias did not adopt the Brussels Conference recommendation in regard to the strength of syrup of ipecac. The U. S. P. preparation is by far the strongest, as it uses 7 per cent fluid extract by volume.—*Ibid.* p. 1244.

Brady, William, states that ipecac usually requires some 15 minutes to act as an emetic and may even then fail after an anxious period of waiting.—N. York M. J. 1910, v. 91, p. 210.

Henderson and Taylor find that ipecac produces bronchial secretion reflexly.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, p. 159.

Rogers, Leonard, recommends that full doses of ipecac be given to every patient operated upon for amœbic abscess, to prevent further abscess formation.—Philippine J. Sc. 1910, v. 5, B, pp. 219–228.

Mitchell, J. C., asserts that the action of ipecac is most marked upon the pneumogastric nerve, influencing the organs under the control of this nerve. It is useful to relieve the irritation of the gastric and intestinal membrane that results in diarrhœa and dysentery.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, pp. 241–243.

Yeager, Wm. H., thinks that ipecac is calculated to disappoint one in the treatment of diarrhœa. The chief action of ipecac is found along the ramifications of the pneumogastric nerve.—Hahnemann. Month. 1910, v. 45, p. 372.

Harbert, J. P., states that ipecac is a remedy of value in those affections of the eye which are characterized principally by irritation. Irritability of the conjunctiva, with profuse lachrymation and more or less injection of the vessels indicate this agent. Cases in which the irritability is out of proportion to the actual disturbance do well under ipecac.—Eclectic M. J. 1910, v. 70, p. 192.

Ellingwood, Finley, calls attention to the use of ipecac in the treatment of alcoholism.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 157.

JALAPA.

Tunmann, O., expresses the belief that the consumption of jalap is decreasing steadily. He calls attention to the fluctuation in the available supply of this drug and presents a table showing the amount imported into and exported from Hamburg from 1897 to 1908 inclusive.—Apoth. Ztg. 1910, v. 25, p. 550.

Holmes, E. M., contributes a note on Mexican jalap root.—Pharm. J. 1910, v. 30 (84), p. 789. See also editorial, p. 779.

The Committee of Reference in Pharmacy presents a modified monograph for jalapa which is defined as the dried tubercles of *Ipomœa purga* Hayne. It should not afford more than 6.5 per cent of ash and the powder when assayed by the process given under "Jalapæ Resina" should yield not less than 7 or more than 9 per cent of resin having the properties described under jalap resin.—Brit. & Col. Drug. 1910, v. 58, p. 28.

Dohme and Engelhardt state that the Ph. Hung. III directs that jalap should contain 8 per cent of resin, which is to be determined by extracting the root with alcohol and purifying the resulting resin by treating it with hot and cold water.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1185.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 59) point out that the Ph. Germ. V requires that jalap yield on incineration not more than 6.5 per cent of ash.

LaWall and Bradshaw report finding 4.2 per cent ash in jalap.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Schneider, Albert, calls attention to the microscopical characteristics of jalap and states that it is frequently adulterated with starches, flour, tubers, related plants, rootlets, etc.—Merck's Rep. 1910, v. 19, p. 191.

Wiley, H. W., reports that 84 shipments of jalap were entered, and of 11 samples analyzed but one was deficient in resin. The resin content averaged 10 per cent.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

Power and Rogerson report a chemical examination of jalap and show that the resin of jalap is of much more complex composition than has hitherto been assumed and that none of the amorphous products obtained from it posseses the attributes of a homogeneous substance.—J. Am. Chem. Soc. 1910, v. 32, pp. 80–113. See also Am. J. Pharm. 1910, v. 82, pp. 355–360.

Beilstein, Christian, reports jalap as being deficient in resin content.—Proc. N. W. D. A. 1910, p. 99.

Francis, J. M., reports that the most remarkable revolution in quality which he has noticed has been in the case of jalap. Up to two years ago a very considerable proportion of the drug appearing in the United States market was very inferior. It is not uncommon at the present time to obtain jalap which will test very high indeed, and practically all that has been submitted for six months past has been of prime quality.—Proc. Pennsylvania Pharm. Ass. 1910, p. 139. See also Engelhardt, Hermann.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1257–1258.

Lyons, A. B., discusses the determination of resin in jalap.—Am. Druggist, 1910, v. 56, p. 78.

Caesar & Loretz (Jahres-Ber. 1910, pp. 121–122) outline their method for the determination of the resin content of jalap, and call attention to the requirements made by the several pharmacopœias.

Bernegau, L. H., reports that one lot of jalap, nearly eaten up by worms, assayed 25.327 per cent total resins. The vermin like all parts of the drug except the resin, which they leave behind.—Proc. Pennsylvania Pharm. Ass. 1910, p. 138.

Table showing reported variations in the resin content of jalap.

Reporter.	Number of samples.	Per cent of mydriatic alkaloids.		References.
		Minimum.	Maximum.	
Caesar & Loretz	(?)	12	23	Jahres-Ber. 1910, p. 59.
Clark, Albert H.	(?)	8	20	Bull. Am. Pharm. Ass. 1910, v. 5, p. 124.
Evans Sons Lescher & Webb.	7	6.5	11.7	Analytical Notes, 1910, p. 38.
Gane, E. H.	12	7.19	23.88	Proc. Am. Pharm. Ass. 1910, v. 58, p. 744.
Goeckel, Henry J.	4	9.3495	12.211	*Ibid.* pp. 1048-1049.
Southall Bros. & Barclay	5	5.00	11.44	Rep. 1910, Birmingham, 1911, p. 10.
Vanderkleed, Chas. E.	9	7.4	25.327	Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Brady, William, notes that jalap acts in 3 hours or less. This cathartic ought not to be given at bed time lest it disturb the night's rest.—N. York M. J. 1910, v. 91, p. 212.

KAOLINUM.

van Bemmelen, J. M., discusses various forms of weathering of silica containing rocks and the production of kaolin.—Ztschr. anorg. Chem. 1910, v. 66, pp. 322–357. See also Chem. Weekblad, 1910, v. 7, pp. 326–332.

Neunier, L. (Presse Méd. 1910, v. 18, No. 55) reports satisfactory and reliable results from the administration of a suspension of kaolin or Fuller's earth, 10 gm. in 100 cc. of water, before the stomach contents are to be withdrawn.—J. Am. M. Ass. 1910, v. 55, p. 722.

See also under Cataplasma Kaolini.

KINO.

The Committee of Reference in Pharmacy presents a modified monograph for kino, which is defined as the juice obtained from incisions in the trunk of *Pterocarpus marsupium* Roxburgh, heated to boiling and evaporated to dryness. Kino should yield not more than 2 per cent of ash.—Brit. & Col. Drug. 1910, v. 58, p. 28.

LaWall and Bradshaw report finding 5.9 per cent ash in kino.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 11) report that not all samples of kino met with satisfy the Pharmacopœia standard of not less than 80 per cent soluble in boiling water, one giving as low as 70.6 per cent, two others 81.31 and 80.02 per cent respectively.

Brown, Linwood A., states that the great trouble with tincture of kino, is its tendency to gelatinize. This can be prevented if the directions of the U. S. P. as to heating, be carefully carried out, and then keeping in small, well stoppered bottles.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 163.

Sayre, L. E., reports that an inspection of the stock of tincture of kino on hand in the shops of retail druggists showed that 16 per cent of the preparations are in a solidified or gelatinous condition, and about 32 per cent of them as they should be, liquid.—Bull. Kansas Bd. Health, 1910, v. 6, p. 52.

Havenhill, L. D., outlines a modified formula for tincture of kino.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 788.

KRAMERIA.

Fichtenholz, A., quotes Tschirch as authority for the derivation of the word krameria from the name of J. G. H. Kramer, a physician and botanist of Temesvar, Hungary.—J. pharm. et chim. 1910, v. 2, p. ii.

Dohme and Engelhardt state that the Ph. Hung. III requires that krameria yield 9 per cent of extractive matter to hot water. The alcoholic extract mixed with a solution of lead acetate should give a red colored precipitate. The filtrate from this should possess a red color also.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1191.

The Committee of Reference in Pharmacy presents a modified monograph for krameria which is defined as the dried root of *Krameria triandra* Ruiz and Pavon (Peruvian rhatany) and of the species *Krameria,* probably *Krameria argentea* Martius (Para rhatany). Both varieties are inodorous, have an astringent taste which is scarcely perceptible in the wood, and should yield not more than 3 per cent of ash.—Brit. & Col. Drug. 1910, v. 58, p. 28.

LaWall and Bradshaw report finding 2.55 per cent ash in krameria.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Schneider, Albert, calls attention to the microscopical characteristics of krameria, and states that this drug is said to be adulterated with roots of related species.—Merck's Rep. 1910, v. 19, p. 191.

Rusby, H. H., states that he has met with Peruvian krameria habitually sold for the superior Brazilian variety.—Practical Druggist, 1910, v. 27, p. 423.

Dohme and Engelhardt outline the Ph. Hung. III test for aqueous extract of krameria.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1182.

Havenhill, L. D., outlines a modified formula for tincture of krameria.—*Ibid.* p. 789.

LACTUCARIUM.

LaWall and Bradshaw report finding 5.72 per cent ash in lactucarium.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Rusby, H. H., states that fragments of lactucarium are almost always covered with gray mold. A suitable reference to this fact should be made in the description and it should be explicitly forbidden that the moldiness extend into the interior of the pieces.—Drug. Circ. 1910, v. 54, p. 618. Also Practical Druggist, 1910, v. 27, p. 424.

Beilstein, Christian, reports lactucarium as being in unfit condition.—Proc. N. W. D. A. 1910, p. 100.

Havenhill. L. D., outlines a modified formula for tincture of lactucarium.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 789.

Hommell, Philemon E., thinks that tincture of lactucarium should be dropped from the U. S. P., as it is seldom exhibited nowadays by the physician.—Merck's Rep. 1910, v. 19, p. 122.

Beringer, George M., recommends making the syrup of lactucarium direct from the drug.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 782.

Cutter, Ephraim, suggests that 10,000 active A. M. A. members test lactucarium and report the result in the *Journal.*—Apothecary, 1910. v. 22, No. 4, p. 15.

LAPPA.

LaWall and Bradshaw report finding from 4.67 to 12.6 per cent ash in burdock root.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Beilstein, Christian, reports that 2 lots of burdock root were found to consist of an unknown root not resembling burdock in any respect.—Proc. N. W. D. A. 1910, p. 105.

LEPTANDRA.

LaWall and Bradshaw report finding 9.1 per cent ash in leptandra.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Power and Rogerson report the results of an investigation to determine the constituents of leptandra. They have been unable to confirm the statement recorded in the literature that leptandra contains a crystalline, bitter glucoside, designated as "leptandrin," to which its activity may be attributed.—J. Chem. Soc., Lond., 1910, v. 97, pp. 1944–1956.

Vanderkleed, C. E., reports 11 assays of mandrake root, lowest 2.038, highest 4.200 per cent resin; 2 above and 9 below standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Osborne, Oliver T., asserts that leptandra, with its extract and fluid extract, could well be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 291.

Burnett, J. A., asserts that leptandra is an important drug. It is more positive in its action than iris, euonymus, chionanthus and similar agents. It is not a harsh agent like podophyllin, even when given more freely.—Eclectic M. J. 1910, v. 70, pp. 483–484.

Crance, A. J., asserts that leptandra virginica is an old standby in Eclectic medicine though not used with a deserving frequency. Most of the cathartic compound pills elaborated by Eclectics contain leptandrin as one of their constituents.—*Ibid.* pp. 484–485.

LIMONIS CORTEX.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 25) point out that the Ph. Germ. V requires that lemon peel be derived from the completely developed but not fully ripe fruit of *Citrus medica* Linné.

The Committee of Reference in Pharmacy suggests that the Ph. Brit. description of lemon peel should be modified to read: For "on the outer surface . . . beneath" read "exhibiting on transverse section numerous oil glands near the epidermis".—Brit. & Col. Drug. 1910, v. 58, p. 28.

Havenhill, L. D., outlines a modified formula for the tincture of lemon peel.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 789.

Table showing some of the analytical results reported for tincture or essence of lemon.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Sayre, L. E	1	1	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.
Jaffa, M. E	3	3	Bull. California Bd. Health, 1910, v. 6, pp. 36, 121.
Connecticut Agric. Exper. Station.	82	29	Proc. Am. Pharm. Ass. 1910, v. 58, p. 744.
Hill, Edward C	10	6	Bull. Colorado Bd. Health, 1910, v. 10, No. 1, p. 3.
Hill, Edward C	34	15	*Ibid.* No. 2, pp. 3–4.
Potter, Hubert F	35	31	Rep. Connecticut Dairy and Food Com. 1910, Hartford, 1911, pp. 121–123.
Hudson, T. G	28	10	Bull. Georgia Dept. Agric. 1910, No. 51, pp. 42–46.
Lythgoe, Hermann C	6	6	Rep. Massachusetts Bd. Health, 1910, p. 356.
Howard, C. D	7	3	New Hampshire San. Bull. 1910, v. 3, pp. 155, 176.
Cutler, William P	23	10	Ann. Rep. Food & Dairy Com. Missouri, 1910, p. 34.
Howard, Charles D	35	21	Rep. New Hampshire Bd. Health, 1910, v. 21, p. 175.
Brown, Lucius P	39	28	Bull. No. 3, Tennessee Food and Drugs Insp. 1910, pp. 17–18.
Knight, Henry G	7	2	Rep. Dairy, Food & Oil Com., Wyoming, 1910, p. 47.

LIMONIS SUCCUS.

Leske, Wilhelm, points out that lemon juice carefully prepared from sound fruit gathered from November to March, should contain from 6 to 6.5 per cent of acid. It keeps well in wood for an entire year, retaining its taste, flavor and color unimpaired, if stored in a cool place, and is preserved either with carbon dioxide under pressure, or by the addition of 0.3 per cent of formic acid, of 0.05 per cent of salicylic acid, or of 10 per cent of alcohol.—Pharm. Ztg. 1910, v. 55, p. 191.

Adams, F. X., points out that the indications for lemon juice are: The patient wants something sour, no matter so it is sour.—Eclectic M. J. 1910, v. 70, p. 72.

LINIMENTA.

Raubenheimer, Otto, compares the U. S. P. and N. F. liniments with those official in foreign pharmacopœias.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1232.

Krekeler, suggests that the frequent criticisms regarding the official formula for liniments made from fatty oils are due to the fact that the oils contain little or no free oleic acid. He suggests the addition of a small quantity of free oleic acid to the oil.—Pharm. Ztg. 1910, v. 55, p. 139.

Hommell, Philemon E., suggests the use of peanut oil in the making of liniments.—Merck's Rep. 1910, v. 19, p. 121.

LINIMENTUM AMMONIÆ.

Raubenheimer, Otto, suggests the use of oil of sesame in making ammonia liniment, and asserts that a liniment thus made can be prepared quickly and easily, is snow white in appearance, is homogeneous and does not separate into two layers.—Am. J. Pharm. 1910, v. 82, p. 479. See also Proc. New York Pharm. Ass. 1910, pp. 192–193, and Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1227–1228.

Krekeler thinks that the crude olive oil, prepared by more or less primitive methods and containing an abundance of free fatty acids, yields a more satisfactory liniment than the acid free oil now obtainable.—Pharm. Ztg. 1910, v. 55, p. 139.

The Local Government Board (38th Ann. Rep. Part II) reports 14, out of 23, samples of ammonia liniment examined in 1908, not up to standard.—Pharm. J. 1910, v. 30 (84), p. 33.

LINIMENTUM CALCIS.

Raubenheimer, Otto, suggests the use of oil of sesame in making lime liniment or Carron oil. He asserts that the preparation can be made extemporaneously and is a beautiful, white homogeneous liniment.—Am. J. Pharm. 1910, v. 82, p. 480. See also Proc. New York Pharm. Ass. 1910, p. 193, and Proc. Am. Pharm. Ass. 1910, v. 58, p. 1228.

LINIMENTUM CAMPHORÆ.

Dohme and Engelhardt state that the Ph. Hung. III directs that sesame oil be used in the making of camphorated oil.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1188.

Raubenheimer, Otto, suggests the use of oil of sesame in making camphor liniment. Circulatory displacement without heat he thinks the ideal method of preparing a full strength camphorated oil.—Am. J. Pharm. 1910, v. 82, p. 480. See also Proc. New York Pharm. Ass. 1910, p. 193.

LaWall, Charles H., thinks that a rubric should be included with camphor liniment for the required percentage of camphor. An identification test for the presence of cotton seed oil should be given, preferably Halphen's test, which gives very good results in practice. A quantitative test for the amount of camphor, he thinks, should also be included. He suggests such a test.—Am. J. Pharm. 1910, v. 82, p. 22.

Lythgoe, Hermann C., reports the examination of 49 samples of camphor liniment; 10 were low in camphor. In 2 of these the analyses showed only 4 per cent camphor.—Rep. Massachusetts Bd. Health, 1910, p. 363.

LINIMENTUM CHLOROFORMI.

LaWall, Charles H., reports that chloroform liniment is a preparation that is frequently found of deficient quality, particularly as to the amount of chloroform present. The specific gravity is an excellent criterion in this respect, and a minimum figure of 1.065 at 25° would practically insure uniformity with the U. S. P. formula. He presents a ready method of approximately estimating the chloroform, which is separated from the preparation by the simple addition of water.—Am. J. Pharm. 1910, v. 82, p. 23.

LINIMENTUM OPII COMPOSITUM N. F.

Raubenheimer, Otto, presents a formula from the Manual of the N. Y. Pharmaceutical Society which is probably the forerunner of linimentum opii compositum N. F.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1229.

LINIMENTUM SAPONIS.

Raubenheimer, Otto, calls attention to a cold process Spanish olive oil soap which when grated will readily and completely dissolve in a mixture of alcohol and water, without the application of heat.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1229.

LINIMENTUM SAPONATO-CAMPHORATUM N. F.

Raubenheimer, Otto, points out that this preparation is official in almost every pharmacopœia, but that the formulas differ very largely. He recommends the use of the Dunning formula.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1229–1230.

Dohme and Engelhardt outline the Ph. Hung. III method for making camphor soap liniment.—*Ibid.* p. 1186.

LINIMENTUM TEREBINTHINÆ ACETICUM N. F.

Raubenheimer, Otto, reviews the formula for acetic turpentine liniment N. F., and asserts that the thickening of this liniment can be readily prevented by using the yolk of two eggs and the albumen of one in place of the entire two eggs as required. He also presents some reference to the history of William Stokes, originator of the formula.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1230–1231.

LINUM.

The Committee of Reference in Pharmacy thinks that the name should be changed to "lini semini" and the description made to read: "The epidermal cells are filled with mucilage, which swells and dissolves when the seeds are soaked in water."—Brit. & Col. Drug. 1910, v. 58, p. 28.

A news note (Oil, Paint and Drug Reporter; 1910, v. 78, October 10, p. 25) calls attention to the probable flax crop of the United States, and estimates that the Northwest will contribute approximately 16,241,000 bushels of linseed. This crop is thought to be upwards of 4 millions bushels short.

Bolley, H. L., asserts that the failure of the flax crop in the Northwest is due to a preventable disease and not to the impoverishment of the soil.—Oil, Paint and Drug Reporter, 1910, v. 78, November 7, p. 28J.

An editorial (*Ibid.* p. 7) states that flax growing does not exhaust the soil chemically but that the failure of farmers in the West to continue producing flaxseed is due to a preventable disease and outlines the remedy as developed by Bolley. See also p. 9.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 54) point out that the Ph. Germ. V requires that linum should contain not more than 5 per cent of ash.

Davis, James E., reports that flaxseed meal presents a peculiar difficulty. The U. S. P. requires 30 per cent oil. From 36 to 44 per cent is usually found in pure goods. This allows the dishonest dealer to mix in a considerable amount of oil cake, and still pass the U. S. P. test, thus having considerable advantage over the dealer selling the pure meal.—Proc. Michigan Pharm. Ass. 1910, p. 62.

Bataille suggests a rapid method for the assay of flaxseed meal, by levigation with benzine.—Bull. sc. pharmacol. 1910, v. 17, p. 83.

Smith, H. B. Willoughby, reports the case of a boy, aged 13, who, after eating a piece of linseed cake, developed an acute urticaria, red flush, swollen and œdematous eyelids.—Brit. M. J. 1910, v. 2, p. 1260.

LIQUORES.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, pp. 60–62; 117–118) presents a definition of solutions, enumerates those included in the Pharmacopœia and the National Formulary, and makes sundry suggestions in connection therewith.

LIQUOR ACIDI ARSENOSI.

Allan, John, reports very gratifying results from liquor arsenici hydrochloridi in 3 or 4 minim doses thrice daily in the treatment of chorea in children.—Am. J. M. Sc. 1910, v. 139, p. 175.

Osborne, Oliver T., asserts that liquor acidi arsenosi is not needed.—J. Am. M. Ass. 1910, v. 54, p. 376.

LIQUOR ALUMINI ACETATIS N. F.

Wehrmann, Fritz, presents some notes on the preparation of solution of aluminum acetate and the difficulty of securing a sample of aluminum sulphate that is well adapted to the making of this preparation.—Apoth. Ztg. 1910, v. 25, pp. 273–274.

Feist and Hochstätter present some observations on the Ph. Germ. IV requirements for solution of aluminum acetate and outline a modified formula with directions for making this preparation.—Arch. Pharm. 1910, v. 248, pp. 525–528.

Bulnheim points out that many of the difficulties met with are due to the fact that aluminum sulphate is never free from water but contains a variable amount.—Pharm. Ztg. 1910, v. 55, p. 324.

Gottheil, William S., reports a case of fatal lead poisoning from the use of Burow's solution.—J. Am. M. Ass. 1910, v. 54, p. 1056.

LIQUOR ALUMINI ACETICO-TARTRATIS N. F.

The formula for aluminum acetico-tartrate solution to be embodied in the Ph. Germ. V is presented with an assay method.—Pharm. Zentralh. 1910, v. 51, pp. 207–208.

Mossler, Gustav, discusses the production and the physical and chemical properties of aluminum acetico-tartrate; also outlines tests for identity and purity.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, pp. 129–130.

Fleissig points out that the new solution of aluminum acetico-tartrate of the Ph. Helv. IV, while a stable clear solution, is locally irritating probably because of the excess of acid.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 106–107.

Hegland, J. M. A., discusses the chemical composition of aluminum acetico-tartrate and the preparation of the official, Ph. Ndl. solution.—Pharm. Weekblad. 1910, v. 47, pp. 905–908.

LIQUOR AMMONII ACETATIS.

The Committee of Reference in Pharmacy suggests a change in the directions for making the solution of ammonium acetate, directing that a sufficient amount of ammonium carbonate be used to neutralize the acetic acid.—Brit. & Col. Drug. 1910, v. 58, p. 28.

Noyes, Kato and Sosman report an investigation on the hydrolysis of ammonium acetate and the ionization of water at high temperature.—J. Am. Chem. Soc. 1910, v. 32, pp. 159–178.

LIQUOR ANTISEPTICUS.

Thum, John K., thinks that antiseptic solution should not be retained in the Pharmacopœia; he also suggests several modifications in the formula for this preparation.—Am. J. Pharm. 1910, v. 82, p. 201.

Hommell, Philemon E., expresses the hope that liquor antisepticus will receive further prominence in the U. S. P. where it belongs.—Merck's Rep. 1910, v. 19, p. 123.

Eberle, E. G., thinks that compound antiseptic solution would be improved by the addition of a small amount of glycerin.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 781.

LIQUOR ANTISEPTICUS ALKALINUS N. F.

Nichols, M. S., suggests modifications in the formula of alkaline antiseptic solution.—Bull. Pharm. 1910, v. 24, p. 169.

Roehrig, A. M., suggests that if one half the amount of glycerin be used in alkaline antiseptic solution a better preparation would result.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 228.

Thum, John K., suggests that the glycerin in this formula be reduced to 100 cc. in each liter and that powdered cudbear be directed in place of the tincture.—*Ibid.* p. 254.

Huegel, Henry O. A., thinks the absence of uniformity of color the chief difficulty with the alkaline antiseptic solution. He makes the tincture of cudbear by mixing the drug with sand and percolating slowly.—Proc. Missouri Pharm. Ass. 1910, p. 69.

The Ohio Valley Druggists' Association suggests that the tincture of cudbear be replaced by an equivalent amount of cudbear.—Proc. Ohio Pharm. Ass. 1910, p. 66.

Hallberg, C. S. N., approves the proposed change in alkaline antiseptic solution except as to the use of pine oil. He suggests reducing the glycerin from 250 to 150 cc.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 28.

LIQUOR ARSENI ET HYDRARGYRI IODIDI.

Brown, Linwood A., points out that the liberation of free iodine in Donovan's solution can be prevented by the addition of a small globule of mercury, to the bottle, and shaking until the color of the iodine disappears.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, pp. 154–155.

Osborne, Oliver T., thinks that liquor arseni et hydrargyri iodidi is not needed in the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 469.

LIQUOR CALCIS.

Dohme and Engelhardt state that the Ph. Hung. III requires that lime water contain not less than 0.13 per cent and not more than 0.17 per cent of calcium hydroxide.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1172.

The Committee of Reference in Pharmacy suggests that the directions for making lime water should read "set aside till the calcium hydroxide has deposited." Saturation is not effected in 12 hours, nor is the supernatant liquid clear.—Brit. & Col. Drug. 1910, v. 58, p. 29.

Mulhan, Otto, discusses the making of lime water and expresses the belief that the present process of washing does not rid the lime completely of the chlorides and other soluble impurities.—Midl. Drug. 1910, v. 44, p. 529. See also Proc. Ohio Pharm. Ass. 1910, p. 65.

Ford, Chas. M., recommends lime, slaked and washed by the U. S. P. process and preserved in semi-liquid condition in small well-stoppered bottles, as a convenient preparation from which to prepare the official lime water.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 96.

Sutro, H. H., in U. S. patent 973,992, October 25, 1910, outlines a process for producing saturated lime water.—J. Soc. Chem. Ind. 1910, v. 29, p. 1379.

Brown, Linwood A., discusses the making and preserving of lime water and describes and illustrates an apparatus, particularly well designed for the dispensing of saturated solution of calcium hydroxide.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, pp. 155–157.

Table showing some of the analytical results reported for lime water.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Sayre, L. E.	21	10	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.
Potter, Hubert F.	6	4	Rep. Connecticut Dairy and Food Com. 1910, Hartford 1911, p. 130.
Hudson, T. G.	67	23	Bull. Georgia Dept. Agric. 1910, No. 51, pp. 130-132.
Mains, S. L.	23	10	Proc. Nebraska Pharm. Ass. 1910, p. 51.
Howard, Charles D.	10	3	Rep. New Hampshire Bd. Health 1910, v. 21, p. 205.
Brown, Lucius P.	23	10	Bull. No. 3, Tennessee Food and Drugs Insp., 1910, p. 30.
Knight, Henry G.	7	3	Rep. Dairy, Food & Oil Com., Wyoming, 1910 pp. 53–54.
Local Government Board	47	8	Pharm. J. 1910, v. 30 (84), p. 33.

Kennard, Dudley, reports the successful treatment of a case of verruca plana by lime water. On a dose of half a pint a day all the warts disappeared in 4 days.—Brit. M. J. 1910, v. 1, p. 81.

LIQUOR CHLORI COMPOSITUS.

Dohme and Engelhardt outline the Ph. Hung. III directions for making solution of chlorine.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1172–1173.

Chattaway, F. D., presents a series of papers, historical and otherwise, on chlorine.—Chem. News, 1910, v. 101, pp. 25, 37, 50, 73.

LaWall, Charles H., reports that a method for the valuation of chlorine water as to the amount of free chlorine should be included.—Am. J. Pharm. 1910, v. 82, p. 23.

LIQUOR CRESOLIS COMPOSITUS.

Thome, E. R., asserts that the addition of 5 per cent alcohol to the linseed oil will facilitate saponification in the making of cresol soap solution.—Practical Druggist, 1910, v. 28, p. 122.

Nitardy, F. W., suggests that the directions for making compound solution of cresol be so changed as to insure complete saponification of the oil before adding the cresol.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 375. See also Proc. Ohio Pharm. Ass. 1910, p. 66.

Deiter discusses the examination of cresol soap solutions.—Pharm. Zentralh. 1910, v. 51, pp. 136–137.

A number of references on the toxicology of lysol and cresol solution will be found in Index Medicus.

See also under Cresol.

LIQUOR FERRI ALBUMINATI N. F.

Dohme and Engelhardt outline the Ph. Hung. III process for solution of iron albuminate.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1186–1187.

The Budapest Correspondent (Lancet 1910, v. 178, p. 961) notes that liquor ferri albuminati has been added to the Ph. Hung. III. There are so many untrustworthy commercial preparations of iron that it seemed necessary to describe good preparations which have a definite composition, containing 0.4 per cent of iron.

de Verdier, Nils, (Farm. Revy 1910, No. 11) presents a formula for liquor ferri oxydati caseinati and criticises the formula suggested by Roy (Apoth. Ztg. 1910, No. 17).—Apoth. Ztg. 1910, v. 25, p. 264.

LIQUOR FERRI ET AMMONII ACETATIS.

Nitardy, F. W., discusses the keeping qualities of Basham's mixture and suggests that the Pharmacopœia direct that this preparation be kept on ice even by the patient.—Rocky Mountain Druggist, 1910, v. 24, Oct., p. 29.

LIQUOR FERRI CHLORIDI.

Dohme and Engelhardt state that the Ph. Hung. III requires that the solution of iron chloride contain 3.5 per cent of metallic iron, which is determined iodometrically by a method similar to that given under iron salts.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

Hemm, Francis, suggests a formula, as recommended by J. Creuse, for liquor ferri chloridi, using potassium chlorate as an oxidizing agent. He recommends comparative experiments with potassium chlorate and hydrogen dioxide solution.—Proc. Missouri Pharm. Ass. 1910, p. 77.

Rosengarten, George D., asserts that the test for oxychloride in iron chloride solution is not sufficiently exacting. It has been found that when tincture of iron chloride is made from a solution which meets the oxychloride test, the tincture subsequently becomes turbid owing to an excess of oxychloride.—Am. J. Pharm. 1910, v. 82, p. 31.

LIQUOR FERRI OXYCHLORIDI N. F.

The formula for dialyzed oxychloride of iron solution to be embodied in the Ph. Germ. V is presented with directions for making and a process of assay.—Pharm. Zentralh. 1910, v. 51, p. 208. Also J. Pharm. Elsass-Lothringen, 1910, v. 37, pp. 79–81.

Dunn, John A., reports that experience with solution of iron oxychloride suggests that solution of iron chloride be used instead of iron tersulphate, formerly suggested by him.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1120.

"tz" discusses the testing of the dialyzed solution of oxychloride of iron, Ph. Germ., and recommends an increase of the silver nitrate solution from 4.5 to 6.5 cc.—Pharm. Zentralh. 1910, v. 51, p. 334.

LIQUOR FERRI SUBSULPHATIS.

Hemm, Francis, presents a formula for solution of subsulphate of iron for inclusion in the U. S. P.—Proc. Missouri Pharm. Ass. 1910, p. 76.

Arny, H. V., reports on 10 samples of solution of ferric subsulphate submitted; 3 U. S. P., the others varying from 6.6 per cent to 12.7 per cent.—Proc. Ohio Pharm. Ass. 1910, p. 69.

LIQUOR FERRI TERSULPHATIS.

Hemm, Francis, suggests a formula, as recommended by J. Creuse, for liquor ferri tersulphatis, using potassium chlorate as an oxidizing agent. He notes that the potassium chlorate should be sufficient to completely oxidize the ferrous salt so as to give a distinct and permanent brown reaction with a weak and freshly made solution of potassium ferricyanide; on the other hand an excess of the chlorate must not be used.—Proc. Missouri Pharm. Ass. 1910, p. 77.

Arny, H. V., reports on 2 samples of solution of ferric sulphate submitted; 1 U. S. P., the other contained 8.6 per cent iron.—Proc. Ohio Pharm. Ass. 1910, p. 69.

LIQUOR FORMALDEHYDI.

Blank, O. (N. Erf. u. Erf.) outlines a method of making solution of formaldehyde by the use of silver in place of copper as the contact substance.—D.-A. Apoth. Ztg. 1910–11, v. 31, p. 44. Also J. Pharm. Elsass-Lothringen, 1910, v. 37, pp. 153–154.

Dohme and Engelhardt state that the Ph. Hung. III requires that formaldehyde have a specific gravity of 1.077 to 1.081 and contain about 35 per cent of absolute formaldehyde. They outline the tests and the method of assay.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1184.

The monograph for solution of formaldehyde to be included in the Ph. Germ. V requires that the article contain 35 per cent of HCHO. The monograph also includes a method of assay.—Pharm. Zentralh. 1910, v. 51, p. 206.

Yoder and Taggart discuss the occurrence of formaldehyde in sugar cane juice and sugar house products; also discuss the practicability of using formaldehyde as a preservative for the fresh juice in sugar houses when the boiling is interrupted from any cause.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 260–264.

Brown, Linwood A, points out that the greatest trouble in keeping formaldehyde solution, is its tendency to be converted into a polymer, known as paraformaldehyde, causing the solution to become turbid. When not intended for medical use, methyl alcohol is sometimes added to the extent of 20 per cent in formaldehyde solutions to prevent polymerization, when intended for use as a disinfectant, or to kill smut in grain, such as wheat.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 157.

Braeutigam, W., discusses the assay of solutions of formaldehyde.—Pharm. Zentralh. 1910, v. 51, pp. 915–916.

Yamamoto and Nakajima report a comparative study of the Ph. Japon. III, the Ph. Austr. VIII, and the Ph. Germ. V methods of assay for solution of formaldehyde. They conclude that the sodium sulphite method now embodied in the Ph. Germ. V is the simplest and gives most satisfactory results.—J. Pharm. Soc. Japan, 1910, p. 871.

Guérithault, B., criticizes the Ph. Fr. V method for the estimation of formaldehyde, which he says gives too high results.—Bull. sc. pharmacol. 1910, v. 17, pp. 31–33.

Eldred, Frank R., reports that one hundred lots of solution of formaldehyde were found to contain from 36 to 39 per cent of formaldehyde; most of the lots were above the official requirement.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 893.

Sayre, L. E., reports on 5 samples of formaldehyde: 4 passed; 1 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1096.

Pearson, W. A., states that one sample of solution of formaldehyde was found which contained a trace of lead.—Proc. Pennsylvanian Pharm. Ass. 1910, p. 139.

Delphin, T., discusses the valuation of formaldehyde soap solutions.—Svensk farm. Tidskr. 1910, v. 14, pp. 197–200, 217–221. See also Allemann, O.—Ztschr. anal. Chem. 1910, v. 49, p. 265.

McClintic, Thomas B., in a study of disinfectants, outlines methods for using formaldehyde.—Public Health Bulletin No. 42, 1910, Washington, 1911, pp. 9–14. See also Dixon, Samuel G., Am. J. Pharm. 1910, v. 82, p. 332 and: Watson, Irving A.—New Hampshire San. Bull. 1910, v. 3, p. 168.

Lassablière, P., presents a comprehensive study of the penetration of formol.—Arch. Internat. pharmacodyn. et thérap. 1910, v. 20, pp. 5–36.

An editorial (Boston M. & S. J. 1910, v. 163, p. 743) calls attention to the recent contribution by Meisenbach (Am. J. Orthop. Surg.) on a new therapeutic use of formalin, stimulation of bone formation. See also editorial Med. Rec. 1910, v. 78, p. 909.

Simms, H. (Dental Surgeon, Jan., 1910) reports some experiments on the action of formalin and other root-dressings.—Therapist, Lond., 1910, v. 20, pp. 17–18.

Raper, Edward R., discusses the use of a mixture of equal parts of cresol and solution of formaldehyde as a powerful, irritating antiseptic and germicide.—Dental Cosmos, 1910, v. 52, pp. 559–560. Also Dental Digest, 1910, v. 16, p. 661.

Buckley, J. P., suggests the use of a mixture of cresol and formaldehyde in the treatment of putrescent pulps and abscessed roots.—Dental Cosmos, 1910, v. 52, p. 430.

Cushing, E. F., calls attention to a report of a case of formaldehyde poisoning (with 10 cases collected from the literature) by John MacLachlan (Cleveland M. J.).—J. Am. M. Ass. 1910, v. 54, p. 390. See also pp. 221, 1140, 1202.

LIQUOR MAGNESII CITRATIS.

Dohme and Engelhardt outline the Ph. Hung. III formula for solution of magnesium citrate.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1190.

Kearfott, C. P., presents a rapid process for making solution of magnesium citrate.—Proc. Virginia Pharm. Ass. 1910, p. 71.

Thum, John K., presents a formula for solution of magnesium citrate, with directions, and suggests sterilizing both the solution and the container.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 645–646. Also Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1260–1261, and Am. Druggist, 1910, v. 57, p. 130.

LaWall, Charles H., asserts that the absence of magnesium sulphate should be one of the additional requirements for solution of magnesium citrate.—Am. J. Pharm. 1910, v. 82, p. 23.

Brady, William, notes that some patients who reject all other active cathartics will readily take liquor magnesii citratis in wineglassful doses hourly until the bottle or bowl is emptied. A bottle freshly prepared and kept on ice will pass for lemonade in the case of children.—N. York M. J. 1910, v. 91, p. 212.

LIQUOR PLUMBI SUBACETATIS.

Dohme and Engelhardt state that the Ph. Hung. III directs that solution of lead acetate should have a specific gravity of from 1.23 to 1.24. No assay process is given.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1190.

Osborne, Oliver T., thinks that liquor plumbi subacetatis dilutus should be omitted as the stronger preparation may be diluted to meet any strength desired.—J. Am. M. Ass. 1910, v. 54, p. 208.

LIQUOR POTASSII ARSENITIS.

Beringer, George M., thinks that the U. S. P. would not be justified in adopting any one of the Brussels Conference titles for Fowler's solution of arsenic, arsenicalis liquor Fowleri, or liquor arsenicalis Fowleri, or Kalii arsenicosi liquor.—Proc. Am. Pharm. Ass. 1910 v. 58, pp. 773–774.

Raubenheimer, Otto, points out that Fowler's solution, which is colorless in most of the foreign pharmacopœias, is tinted and flavored when made according to the U. S. P. formula.—*Ibid.* p. 1138.

The Committee of Reference in Pharmacy suggests that arsenical solution be made a simple solution of arsenious anhydride flavored with compound tincture of lavender, so as to avoid the well-known and dangerous incompatibility of this solution with solutions of alkaloidal salts, especially strychnine, with which it is often prescribed.—Brit. & Col. Drug. 1910, v. 58, p 28.

Bernegau, L. H., reports that as it is nearly impossible to manufacture potassium arsenite free from potassium carbonate, the salt should be held to a standard of at least 90 per cent, calculated as $KAsO_2$. $HAsO_2$. H_2O.—Proc. Pennsylvania Pharm. Ass. 1910, p. 145.

Brown, Linwood A., states that arsenic in Fowler's solution should be in the arsenous condition, but if unduly exposed to the air, it absorbs oxygen and is converted into the arsenate. It would be well to keep this preparation in small, well filled, well stoppered bottles.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 154.

Table showing some of the analytical results reported for solution of potassium arsenite.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Hudson, T. G	48	29	Bull. Georgia Dept. Agric. 1910, No. 51, pp. 143–144.
Wulling, Frederick J	3	2	Northwestern Druggist, 1910, v. 11, Sept., p. 25.
Arny, H. V	15	10	Proc. Ohio Pharm. Ass. 1910, p. 69.
Knight, Henry G	3	2	Rep. Dairy, Food & Oil Com., Wyoming, 1910, p. 48.

Osborne, Oliver T., asserts that the best action of arsenic is obtained from Fowler's solution, and the liquid preparation is the only one that should be used when arsenic is pushed to its full physiologic limit.—J. Am. M. Ass. 1910, v. 54, p. 376.

LIQUOR POTASSII CITRATIS.

Goerner, Paul, reviews the history of the type preparation for solution of potassium citrate. This formula largely recognized in European pharmacopœias as Potio Riverii originated with Lazere Rivière professor of medicine at Montpellier about the middle of the 17th century.—J. Pharm. Elsass-Lothringen, 1910, v. 37, pp. 8–11.

An editorial (N. A. R. D. Notes, 1910–11, v. 11, p. 197) points out that it is important that solution of potassium citrate U. S. P. be made fresh when wanted, for aqueous solutions of citric acid do not keep well.

LIQUOR SACCHARINI N. F.

Hallberg, C. S. N., suggests reducing the saccharin in solution of saccharin to 5 in 100 cc.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 28.

LIQUOR SODÆ CHLORINATÆ.

Elvove, Elias, in a note on the preparation of chlorinated soda solution, outlines Graebe's method for making a solution of definite strength.—Am. J. Pharm. 1910, v. 82, pp. 161–166.

Molineaux, J. G., reports that some samples of solution of chlorinated potassa were free from chlorine. Others assayed from 0.608 to 2.86 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 747.

LIQUOR SODII ARSENATIS.

Osborne, Oliver T., asserts that liquor sodii arsenatis is not needed in the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 276.

LIQUOR SODII PHOSPHATIS COMPOSITUS.

Horn, Wilbur F., discusses the making of compound solution of sodium phosphate, and points out that in the present official solution about two-thirds the amount of citric acid is used that is necessary to convert all the hydrogen disodium phosphate into dihydrogen sodium phosphate. He asserts that solutions made with mineral acids are more stable than those made with organic acids.—Proc. Pennsylvania Pharm. Ass. 1910, pp. 245–247.

Glover, W. H., suggests the use of glycerin in place of water in making the compound solution of sodium phosphate.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1269.

Thome, E. R., recommends increasing the citric acid in compound solution of sodium phosphate to 150 gm. to prevent crystallization.—Practical Druggist, 1910, v. 28, p. 123.

Members of the Denver Branch of the A. Ph. A. recommend increasing the citric acid in compound solution of sodium phosphate to 200 gm., which insures a permanent solution.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 166.

Eliel, Leo, states that if phosphoric acid is used in making compound solution of sodium phosphate in place of citric acid, a permanent preparation results. Sodium nitrate can be eliminated as it serves no useful purpose and appears to have been added to the formula to combat some proprietary preparation on the market at the time.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1131–1132.

Hankey, William T., states that the compound solution of sodium phosphate when kept in partly filled bottles becomes stringy. He suggests the use of phosphoric acid in place of citric acid in the preparation.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 106.

LITHII BENZOAS.

Seidell, Atherton, reports experimental determinations on the solubility of lithium benzoate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 38.2 gm., and 100 gm. of U. S. P. alcohol will dissolve 5.8 gm. of lithium benzoate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 26–28.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 46) report that 4 samples of lithium benzoate tested varied in purity between 95.9 and 98.2 per cent, with free acid 0.7 to 1.2 per cent.

Lecco, Marco T., presents some observations on the detection and the estimation of lithium in water.—Ztschr. anal. Chem. 1910, v. 49, pp. 286–287.

LITHII BROMIDUM.

De Jonge, Cornelius, complains of the difficulty of obtaining a suitable lithium bromide, complying with the official rubric.—Am. Druggist, 1910, v. 57, p. 385.

LITHII CARBONAS.

Dohme and Engelhardt state that the Ph. Hung. III requires that lithium carbonate be 99 per cent pure.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

Bachman, G., reports that the lithium carbonate examined showed a minimum percentage of 94.72, a maximum of 98.01.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Koldewijn, H. B., reviews some of the literature relating to the occurrence of lithium in milk and reports a number of experiments from which he concludes that lithium is constantly present in milk.—Arch Pharm. 1910, v. 248, p. 632.

An editorial (Critic and Guide, 1910, v. 13, p. 154) points out that the one time fashionable practice of considering lithium as the specific for uric acid was due to the test-tube experiment made by Garrod.

Barton, W. M., thinks that the deletion of the lithium salts from the Pharmacopœia would go far toward correcting a now widespread impression that the lithium ion is really a useful therapeutic agent.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 294.

LITHII CITRAS.

Riedel's Berichte (1910, p. xxxviii) presents a monograph giving the composition, properties and tests for lithium citrate.

Seidell, Atherton, reports experimental determinations on the solubility of lithium citrate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 74.5 gm., and 100 gm. of U. S. P. alcohol will dissolve 0.04 gm. of lithium citrate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 39–41, 91.

LITHII SALICYLAS.

Seidell, Atherton, finds that at 25°, 100 gm. of water will dissolve 127.3 gm., and 100 gm. of U. S. P. alcohol will dissolve 83.8 gm. of lithium salicylate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 65–67, 91.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 46) report that 2 samples of lithium salicylate tested were both faintly acid to litmus, gave no color with strong sulphuric acid and contained only extremely small traces of calcium.

LOBELIA.

Fichtenholz, A., quotes Tschirch as authority for the derivation of the word lobelia from the name of Lobel, a botanist who died in 1616.—J. pharm. et chim. 1910, v. 2, p. ii.

Dohme and Engelhardt state that the Ph. Hung. III requires that lobelia herb, extracted with diluted alcohol, yield about 18 per cent of extractive matter.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

Schneider, Albert, discusses the histology of lobelia, and states that tops and basal parts are often marketed separately.—Merck's Rep. 1910, v. 19, p. 191.

Rusby, H. H., states that he has met with lobelia consisting almost wholly of stems.—Practical Druggist, 1910, v. 27, p. 424.

LaWall and Bradshaw report finding 8.8 and 14.5 per cent ash in lobelia herb.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Havenhill, L. D., outlines a modified formula for tincture of lobelia.—*Ibid.* p. 789.

Hommell, Philemon E., thinks that increasing the amount of alcohol in the formula for tincture of lobelia would overcome the tendency to precipitate.—Merck's Rep. 1910, v. 19, p. 122.

Lloyd, John Uri, in an article on American materia medica, reviews the evolution of the present day use of lobelia.—Am. J. Pharm. 1910, v. 82, p. 82.

Felter, H. W., asserts that lobelia is the remedy for fullness of tissue, dullness of the sensibilities, and excessive secretions not easily removed. It is particularly valuable in bronchitis, broncho-pneumonia and pneumonia.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 205.

Jentzsch, Ernest, reports the successful treatment of a case of diphtheria by hypodermic injection of lobelia.—Eclectic M. J. 1910, v. 70, p. 585. See also Nat. Eclec. M. Ass. Quart. 1910, v. 1, pp. 169–174.

Adams, F. X., points out that lobelia inflata is indicated by a small, slow and sometimes irregular pulse. Face normal in its appearance. Pupil dilated; tongue broad, heavily coated, not red and smooth or slick. Anywhere we wish a relaxant or antispasmodic it is to be thought of, but for this purpose use the large dose, as it is sedative. The small dose is a stimulant, and one of the best.—Eclectic M. J. 1910, v. 70, p. 74.

Waddington, J. E. G., reports some experiences with lobelia, hypodermically and otherwise.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, pp. 167–168.

Muto and Iwakawa report an experimental study on the toxicology of lobeline.—Arch. exper. Path. u. Pharmakol. 1910, v. 62, pp. 282–295.

LOTIO PLUMBI ET OPII N. F.

Barton, Wilfred M., calls attention to the uselessness of lead and opium wash for any local anæsthetic action.—J. Am. M. Ass. 1910, v. 55, p. 284.

LUPULINUM.

Schneider, Albert, states that lupulin presents very striking glandular structures. It may be adulterated with sand. It deteriorates rapidly.—Merck's Rep. 1910, v. 19, p. 192.

Table showing report variations in ash content of lupulin.

Reporter.	Number of samples.	Per cent of ash.		References.
		Minimum.	Maximum.	
Eldred, Frank R	26	10.8	36	Proc. Am. Pharm. Ass. 1910, v. 58, p. 893.
Bernegau, L. H	11	10	27.5	Proc. Pennsylvania Pharm. Ass. 1910, p. 139.
Gane, E. H	1		20.5	Proc. Am. Pharm. Ass. 1910, v. 58, p. 744.
Evans Sons Lescher & Webb	1	9.2		Analytical Notes, 1910, p. 46.

Eldred, Frank R., thinks that the ash limit should be raised to 18 per cent and a good drug could be insured by raising the requirement for ether-soluble material to 65 per cent or 66 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 893.

LYCOPODIUM.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 40) point out that the Ph. Germ. V lycopodium is to be derived from *Lycopodium clavatum* Linné and that the permissible ash content has been reduced from 5 to 3 per cent.

Schneider, Albert, states that lycopodium presents a very characteristic structure (spores). It may be adulterated with cereal, talcum, turmeric, dextrin, pine pollen, sulphur and other substances.—Merck's Rep. 1910, v. 19, p. 192.

LaWall and Bradshaw report finding from 1.3 to 2.45 per cent ash in lycopodium.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Eldred, Frank R., reports that four lots of lycopodium yielded from 1.1 to 2.2 per cent of ash. The official ash limit is unnecessarily high.—*Ibid.* p. 893.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 46) report that 4 samples of lycopodium tested left 1 to 1.25 per cent ash on ignition.

Caesar & Loretz (Jahres-Ber. 1910, pp. 99–100) outline their method for determining the ash content of lycopodium and point out that the permissible ash content in the pharmacopœias mentioned varies from 2.5 per cent, in the Ph. Svec. IX, to 5 per cent in 6 of the remaining pharmacopœias, including the U. S. P.

Fisher, C. E., commends lycopodium for leg ulcers.—J. Am. Inst. Homœop. 1910, v. 2, p. 16.

Fornias, E., quotes Wassily who points out that Lycopodium acts particularly on the bladder, and the digestive and respiratory organs.—Hahnemann. Month. 1910, v. 45, p. 553.

Monroe, A. L., quotes Kinyon who states that lycopodium is a remedy indicated in chronic suppression of the menses, with accompanying sadness and melancholy. With a feeling of distension in the abdomen. Menses suddenly suppressed by fright. Pains from right to left. . . . Rumbling gurgling noise in the abdomen, so loud as to be heard by those near by, to the great annoyance of the patient.—*Ibid.* p. 237.

MAGMA OF BISMUTH.

Beringer, George M., makes hydrated oxide of bismuth by an inverted percolation process which he says is in reality a process of dialysis.—Am. J. Pharm. 1910, v. 82, p. 250.

Vanino and Zumbusch review the chemistry of hydrated oxide of bismuth and recommend the use of mannite to insure the absence of nitrate.—Arch. Pharm. 1910, v. 248, pp. 665–669.

Hulse, Judson A., warns against the use of bismuth preparations in the shape of creams, milks, etc. In a series of observations covering their administration to 21 infants suffering from acute gastro-enteric conditions, he failed to observe a sedative or astringent action in a single case. In a number of cases the bismuth milk passed through the entire alimentary tract practically unchanged, while in control observations it was found that the administration of bismuth subnitrate resulted in darkened stools, lessened amount of blood, and almost complete disappearance of mucus within the first 24 hours of its administration.—J. Am. M. Ass. 1910, v. 55, p. 236.

MAGMA MAGNESIÆ N. F.

Kaiser, W. F., outlines a method for making milk of magnesia on short notice.—Proc. Wisconsin Pharm. Ass. 1910, pp. 63–64.

Hankey, William T., states that the formula for magma magnesiæ N. F. never gave good results in his hands. The product does not keep gelatinous as does the well known proprietary article.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 106.

Cliffe, W. L., points out that milk of magnesia made with ordinarily clear water shortly acquires a yellowish tint, and thinks that this preparation must necessarily be washed with distilled water.—Am. J. Pharm. 1910, v. 82, p. 250.

Beringer, George M., recommends the use of an inverted percolation process for washing precipitates of this kind.—*Ibid.* p. 250.

Needham, R. H., suggests using hot water for washing magma magnesiæ. This, he thinks, would eliminate the contamination of organic matter.—Proc. Texas Pharm. Ass. 1910, p. 71.

MAGNESII CARBONAS.

Hallberg, C. S. N., asserts that the principal makes of magnesium carbonate come from Philadelphia and the packages have pasted over the very elegant looking analysis which was formerly included in the label of the package, a little strip or label "for technical uses only."—Proc. Nebraska Pharm. Ass. 1910, p. 33.

Beilstein, Christian, points out that magnesium carbonate like many other salts is made on a large scale for technical uses. The manufacturers do not cater particularly to the pharmaceutical trade, and frequently lots produced under the usual conditions do not conform strictly to the Pharmacopœial requirements. Iron, calcium, and silicon are the most frequent impurities found.—Proc. N. W. D. A. 1910, p. 102.

Goeckel, Henry J., reports that one lot of magnesium carbonate examined was not clearly soluble in acetic acid, gave a slight flocculent precipitate, and showed considerable calcium and iron.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1049.

Osborne, Oliver T., asserts that there seems to be no reason for the preference of magnesium carbonate above the magnesium oxide. It might therefore be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 291.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, p. 242) calls attention to a paper by Ohleyer (Ärztliche Rundschau, 1910, p. 433) on the use of $Mg\,CO_3$ as a dry dressing for burns.

MAGNESII OXIDUM.

Dohme and Engelhardt state that the Ph. Hung. III requires that 10 gm. of magnesium oxide heated to redness in a crucible should lose not more than 1 gm.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

Pearson, W. A., reports on a sample of calcined magnesia which contained approximately 5 per cent more water of hydration than most samples previously examined.—Proc. Pennsylvania Pharm. Ass. 1910, pp. 222–223.

Miller, A. W., reports receiving 5 cases of Jennings Magnesia which were marked "not U. S. P."—*Ibid.* p. 227.

Puckner and Hilpert report a study of magnesium peroxide and present a table showing the variability in the composition of the commercial product.—Rep. Chem. Lab. Am. M. Ass. 1910, v. 3, pp. 88–95.

Lemaire, P. (Bull. Soc. pharm. Bordeaux, 1910, pp. 56–60) reports the examination of ten samples in which the MgO_2 content varied from 2.072 to 26.880 and urges the need for the examination of the product when bought.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 104.

MAGNESII OXIDUM PONDEROSUM.

Osborne, Oliver T., considers heavy magnesia superfluous.—J. Am. M. Ass. 1910, v. 54, p. 291.

MAGNESII SULPHAS.

Xrayser II says that the discovery that there is more magnesium sulphate in the sea than ever there was at Epsom was the deathblow of the Surrey spa. Drew first extracted magnesium sulphate from the Epsom spring in 1695 and in the beginning of the following century magnesia itself was prepared by precipitating a solution of Epsom salts with one of potash.—Chem. & Drug. 1910, v. 76, p. 737.

Beilstein, Christian, points out that the Pharmacopœia gives no test for the absence of chlorides in magnesium sulphate, but states that the salt must be 99.7 per cent pure. Chlorides are usually found and probably are largely responsible for the disagreeable taste so often noticed.—Proc. N. W. D. A. 1910, p. 103.

Lemaire, P. (Bull. Soc. pharm. Bordeaux, 1909, v. 49, pp. 258-260) shows that none of the commercial magnesium sulphates respond to the requirements of the Ph. Fr. V, as they all give precipitates or turbidity with silver nitrate, indicating the presence of greater or less quantities of chlorides.—Bull. sc. pharmacol. 1910, v. 17, p. 35.

An editorial (Nat. Druggist, 1910, v. 40, pp. 153-154) calls attention to the possible mistaking of oxalic acid for Epsom salts, and the need for applying the chemical tests for identity which are given in the U. S. P.

Woolsey, J. F., reports that magnesium sulphate is not of U. S. P. quality and apparently cannot be obtained in large ways without the price being materially increased. That sold almost entirely is quite impure.—Proc. Pennsylvania Pharm. Ass. 1910, p. 139.

Hallberg, C. S. N., states that, in Illinois, Epsom salt is found containing 25 to 30 per cent of impurities, such as chloride of calcium and similar salts, which are certainly not desirable, considering the large dose in which Epsom salts is taken when it is taken as a laxative.—Proc. Nebraska Pharm. Ass. 1910, p. 33.

Pearson, W. A., reports that several lots of magnesium sulphate were examined for chlorides. All containing from a faint trace to 0.35 per cent and the bitterness of the samples seemed to increase in proportion to the amount of chloride present.—Proc. Pennsylvania Pharm. Ass. 1910, p. 139.

Beal, George D., quotes from the last report of the Ohio Dairy and Food Department, 2 samples of Epsom salt examined, both failed.—Proc. Ohio Pharm. Ass. 1910, p. 73.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 47) report that 61 deliveries of magnesium sulphate all contained less than 4 parts per million of arsenic; this impurity seldom becomes greater in even the commercial varieties. Magnesium chloride also was present to an extent of between 0.04 and 0.17 per cent. The commercial grades contain more chloride and traces of lead.

Brady, William, notes that magnesium sulphate acts in half to one hour, taken half an hour before breakfast; in two or four hours if the patient is in bed.—N. York M. J. 1910, v. 91, p. 212.

Tyrode, Maurice Vejux, explains the purgative action of magnesium sulphate and other salts.—Boston M. & S. J. 1910, v. 162, p. 177.

Matthews and Brooks present a communication on the action of magnesium sulphate.—J. Pharmacol. & Exper. Therap. 1910-11, v. 2, pp. 87-99.

Phillips, Llewellyn, contributes a paper on the treatment of tetanus by the intraspinal injection of a solution of magnesium sulphate.—Brit. M. J. 1910, v. 1, p. 263.

See also Paterson, Peter, Lancet, 1910, v. 178, p. 922, and Fox, Charles D., Med. Rec. 1910, v. 78, p. 720; also p. 262.

Boos, William F., presents a study of 10 cases of magnesium poisoning, with his conclusions.—J. Am. M. Ass. 1910, v. 55, pp. 2037-2041.

Guthrie and Ryan conclude that magnesium salts cannot be regarded as having marked specific anæsthetic properties.—Am. J. Physiol. 1910, v. 26, pp. 329-345.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 243-245) calls attention to a number of communications on the use of $MgSO_4$ as an anæsthetic.

MALTUM.

Ling, Arthur R., contributes a note on the determination of the diastasic power of malt and malt extract.—Pharm. J. 1910, v. 31 (85), p. 267. See also pp. 290, 312, 333, and Chem. & Drug. 1910, v 76, p. 924.

Harrison, E. F., discusses the determination of the diastatic power of malt extract.—Pharm. J. 1910, v. 31 (85), pp. 121-123, 333.

Smith, A. R., discusses Kjeldahl's work on the measurement of diastasic power.—*Ibid.* p. 362.

Nishisaki, K., discusses methods of testing diastase containing preparations and proposes a modification of the Ph. Japon. III method for the valuation of diastase.—J. Pharm. Soc. Japan, 1910, p. 709.

Gehe & Co. (Handels-Bericht, 1910, p. 118) call attention to the desirability of having a diastase standard for extract of malt. They report using the method proposed by Dunstan and Dimmock.

Goeckel, Henry J., reports that one lot of malt extract examined gave alcohol (absolute)—4 per cent; and diastasic strength—6.751 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1049.

Gane, E. H., asserts that an assay for diastasic value should be given under extract of malt. The extract deteriorates on keeping and becomes acid. Its value for medicinal and dietetic purposes is greatly overestimated and its use by physicians and its inclusion in the U. S. P. is another tribute to the art of advertising.—Drug Topics, 1910, v. 25, p. 229.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 47) report that the variation in diastatic activity of 33 samples of malt extract tested was 81 to 788 B. P. C. units.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 32) report that a sample of malt extract from stock tested by the method of Harrison and Gair, gave the following satisfactory results: reducing sugars as maltose 67.8 per cent; diastatic value 474.

The British Medical Journal (1910, v. 1, p. 29), discussing the composition of some proprietary food preparations, describes and gives formulas for a number of combinations of malt extract.

Osborne, Oliver T., asserts that diastase preparations and malt preparations may have their use in aiding digestion of starches, but ordinarily it is much better, when there is poor digestion of starches, to limit the amount ingested or to discover the particular starch that is the best digested. There is no amount of diastase or malt that will cure, or much aid, a diabetic.—J. Am. M. Ass. 1910, v. 54, p. 290.

MANGANI DIOXIDUM PRÆCIPITATUM.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 47) report that 2 commercial samples of manganese dioxide had a purity equivalent to 79 and 86 per cent MnO_2 respectively.

MANNA.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 40) point out that Ph. Germ. V manna is to be derived from *Fraxinus ornus* Linné, to contain at least 75 per cent of mannite, not more than 10 per cent of moisture and not more than 3 per cent of ash.

LaWall and Bradshaw report finding 1.06 and 6.50 per cent ash in manna.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Breves, Rudolph, thinks that, if manna is not omitted, the amount of mannitol, the insoluble matter in alcohol, and the moisture ought to be stated.—Practical Druggist, 1910, v. 28, p. 39.

MARRUBIUM.

Rusby, H. H., points out that the Pharmacopœia defines marrubium as the "leaves and flowering tops." He thinks the definition should specify that the "tops" which are gathered should not exceed a certain length, about three or four inches being probably correct in this instance.—Drug. Circ. 1910, v. 54, p. 616.

Delpy, Hedwig, reports a pharmacognostical study of *Marrubium vulgare* L.—Ztscher. allg. österr. Apoth.-Ver. 1910, v. 48, p. 300.

LaWall and Bradshaw report having found 22.8 per cent ash in marrubium.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Kremers, Edward, points out that horehound is not supposed to be good for anything after it is a year old.—Proc. Wisconsin Pharm. Ass. 1910, p. 35.

MASSA FERRI CARBONATIS.

LaWall, Charles H., reports that a requirement for the minimum per cent of ferrous carbonate is just as important for massa ferri carbonatis as for ferri carbonas saccharatus, and a similar method for its determination should be included.—Am. J. Pharm. 1910, v. 82, p. 24.

MASSA HYDRARGYRI.

LaWall, Charles H., thinks that a purity rubric together with a method for estimating the amount of metallic mercury should be included for massa hydrargyri.—Am. J. Pharm. 1910, v. 82, p. 24.

Sayre, L. E., reports on 4 samples of mass of mercury: all illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.

MASTICHE.

Fichtenholz, A., quotes Tschirch as authority for the statement that mastic comes from *mastichaein*, meaning to chew, recalling the use of this drug.—J. pharm. et chim. 1910, v. 2, p. ii.

Eldred, Frank R., reports that the acid values of fourteen lots of mastic varied from 50 to 67, only one being as high as the official requirement of 65.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 893.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 247–248) calls attention to contributions by v. Oettingen and others on the use of mastic dressings for the treatment of wounds.

MATICO.

Gehe & Co. (Handels-Bericht, 1910, p. 66) call attention to some of the recent work that has been done in connection with the chemistry and composition of matico, and review the descriptions that have been given of the leaves, of a number of varieties of piper.

LaWall and Bradshaw report having found 16.1 and 16.8 per cent ash in matico.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Rusby, H. H., reports having met with matico leaves, consisting, 9 times out of 10, of one of three spurious species, none of which was more than one-fifth as medicinally active as the genuine.—Practical Druggist, 1910, v. 27, p. 424.

Beilstein, Christian, reports matico containing spurious leaves.—Proc. N. W. D. A. 1910, p. 100.

MATRICARIA.

Tunmann, O., discusses the production of matricaria and presents a table showing the amount exported from Hamburg during the years 1897 to 1908.—Apoth. Ztg. 1910, v. 25, p. 706.

Heinrich Haensel (Bericht, April-September, 1910, p. 13), in discussing the economic conditions of the chamomile market, intimates that the bulk of the German chamomile at the present time is being grown in Hungary.

Wiley, H. W., reports that chamomile continues to be of excellent quality.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

LaWall and Bradshaw report finding 9.65 and 11.68 per cent ash in matricaria.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Klobb, Garnier and Ehrwein describe certain hydrocarbons derived from *Matricaria chamomilla.*—Bull. Soc. chim. France, 1910, v. 7, p. 946.

Walter, E., enumerates some of the North American Compositæ that have established themselves in Central Europe and describes one of the more recent acquisitions, *Matricaria discoïdea* D. C., a plant closely related to the official source of matricaria.—J. Pharm. Elsass-Lothringen, 1910, v. 37, pp. 213–217.

Heinrich, Haensel (Bericht, April-September 1910, pp. 14–15) discusses the physical properties of oil of chamomile and points out that this oil contains a paraffin which on distillation of the oil occurs as a dark-colored mass having a melting point of from 53°–54°.

MEL.

Tunmann, O., discusses the production of honey in Germany, and presents some data showing the amount of honey imported at the port of Hamburg from various countries.—Apoth. Ztg. 1910, v. 25, p. 312.

Küstenmacher, M., discusses the chemistry of the formation of honey in the honey bee.—Biochem. Ztschr. 1910–11, v. 30, pp. 237–254.

Dohme and Engelhardt outline the Ph. Hung. III requirements for honey.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

LaWall, Charles H., asserts that the test for absence of cane sugar in honey is too rigid. Honey normally contains cane sugar to the extent of 7 per cent at times.—Am. J. Pharm. 1910, v. 82, p. 24.

van Berk, L. H., discusses the examination of honey according to the methods given in the Ph. Ndl. IV.—Pharm. Weekblad, 1910, v. 47, pp. 908–909.

van Giersbergen, L., discusses the valuation of honey according to its physical properties; also comments on the production of honey.—Ztschr. öffentl. Chem. 1910, v. 16, pp. 369–375. Also Chem. Weekblad, 1910, v. 7, pp. 629–638.

Voermann, G. L., discusses the chemical valuation of honey.—Ztschr. öffentl. Chem. 1910, v. 16, pp. 400–407.

Auzinger, August, reports observations on the ferments in honey and their value in determining the purity of this article.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 19, pp. 65–83; 353–362.

See also Lenz, Wilhelm, Apoth. Ztg. 1910, v. 25, pp. 678–679, and Arb. pharm. Inst. Univ. Berl. (1910), 1911, v. 8, pp. 222–225.

Muttelet, F., discusses the analysis of artificial honeys.—Ann. Falsif. 1910, v. 3, pp. 206–207.

Gehe & Co. (Handels-Bericht, 1910, p. 78) point out that the differentiation of true and adulterated honey is a problem that has been worked on for many years without having been exhausted. The difficulties encountered are particularly great in connection with mixtures of pure honey with molasses or invert sugar.

Lindner, B., in a contribution on the examination of honey, presents a table giving the analytical findings of a number of samples of honey from various countries.—Pharm. Zentralh. 1910, v. 51, pp. 103–105.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, p. 221) discusses the official honeys of the Pharmacopœia and calls attention to some of the similar preparations official in foreign pharmacopœias.

Hemm, Francis, states that since the day of glycerin the honey preparations have more and more gone into disuse, and to-day very few honey preparations are prescribed or called for in the drug store. As a pill excipient, honey finds an important place at the prescription counter. Mouth washes and gargles are still used to some extent.—Proc. Missouri Pharm. Ass. 1910, pp. 100-101.

For additional references on the chemistry, pharmacology and uses of honey see Chem. Abstr., Exper. Sta. Rec., Ztschr. Unters. Nahr. u. Genussm., and Index Medicus.

MEL DEPURATUM.

Mittelbach, William, asserts that clarified honey might well be left out of the Pharmacopœia and recognized in the National Formulary.—Proc. Missouri Pharm. Ass. 1910, p. 98.

MENTHA PIPERITA.

An unsigned article (Spatula, 1910, v. 17, No. 1, p. 18) states that peppermint growing is a new industry on the reclaimed lands of Louisiana.

Thoms, H., reports experiments in the cultivation of Japanese peppermint in Germany.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 424–431. Also Arb. pharm. Inst. Univ. Berl. (1910), 1911, v. 8, pp. 93–98, and Pharm. Post, 1910, v. 43, pp. 1033–1034.

Rusby, H. H., thinks that the "top" permissible in peppermint should be specified as not exceeding 3 inches in length.—Drug. Circ. 1910, v. 54, p. 617. Also Practical Druggist, 1910, v. 27, p. 424.

LaWall and Bradshaw report finding 10.1 and 11.15 per cent ash in peppermint.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Chace, E. M., in referee report on flavoring extracts outlines a method for the determination of oil of peppermint in spirit of peppermint.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 76. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137).

LaWall, Charles H., thinks that the specific gravity of spiritus menthæ piperitæ should be stated. A method for the determination of alcohol should be included, as should a method for the determination of the volatile oil. He suggests methods.—Am. J. Pharm. 1910, v. 82, p. 25.

"Conchologist" asks what is essence of peppermint and comments on the diversity of practice. He has found the oil to vary from 1 : 5 to 1 : 15.—Pharm. J. 1910, v. 30 (84), p. 776.

Table showing some of the analytical results reported in connection with spirit of peppermint.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Sayre, L. E	197	149	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.
Massachusetts State Board of Health.	6	6	*Ibid.* p. 747.
Jaffa, M. E	1	1	Bull. California Bd. Health, 1910, v. 5, p. 199.
Potter, Hubert F	5	5	Rep. Connecticut Dairy and Food Com., 1910, Hartford, 1911, p. 125.
Havenhill, L. D	148	105	Proc. Kansas Pharm. Ass. 1910, p. 57.
Lythgoe, Hermann C	70	14	Rep. Massachusetts Bd. Health, 1910, p. 369.
Mains, S. L	6	4	Proc. Nebraska Pharm. Ass. 1910, p. 51.
Howard, Charles D	23	17	Rep. New Hampshire Bd. Health, 1910, v. 21, p. 205.
Ladd, E. F	24	9	Spec. Bull. Agric. Exper. Sta., North Dakota, 1910, v. 1, p. 253.

Weinstein, Abraham, thinks that the direction for macerating the oil of peppermint together with the leaves in alcohol for 24 hours is not practical, for the leaves unnecessarily absorb some of the oil. The better way is to macerate the leaves with the alcohol for 24 hours, filtering and then adding the oil.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1280.

MENTHA VIRIDIS.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 131) present a review of the area under cultivation for spearmint in the States of Michigan, Indiana and New York.

Rusby, H. H., states that he has met with spearmint heavily mixed with peppermint.—Practical Druggist, 1910, v. 27, p. 424. Also Drug. Circ. 1910, v. 54, p. 617.

LaWall and Bradshaw report finding 9.7 per cent ash in spearmint herb.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Osborne, Oliver T., declares that if spearmint, or mentha viridis, be omitted from the Pharmacopœia it will do away with the adjective piperita and save unnecessary writing when peppermint is ordered.—J. Am. M. Ass. 1910, v. 54, p. 291.

MENTHOL.

An editorial (Brit. & Col. Drug. 1910, v. 58, pp. 253–254) discusses the peppermint and menthol situation. See also Chem. & Drug. 1910, v. 77, p. 931.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 126), in commenting on the Ph. Hung. III requirements, point out that the melting point of menthol lies between 43.5° and 44.5°, and that menthol boils at 217°, if the mercury thread of the thermometer is wholly surrounded by the steam.

They also (*Ibid.* p. 131) review the Ph. Ital. III requirements for menthol.

Riedel's Berichte (1910, p. xxviii) reports the boiling point of commercial menthol as ranging from 208°–211°.

Thoms, H., reports on the examination of samples of Japanese oil of peppermint produced in Germany and comments on the determination of free and combined menthol in oil of peppermint.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 424–431.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 48) report that 7 samples of Japanese menthol had melting points only varying between 42° and 43°.

Sayre, L. E., reports on 8 samples of menthol: 4 passed; 4 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.

Short and Salisbury, in a study of the action of cutaneous anæsthetics, present observations on the mode of action of menthol, which they did not find to be a reliable local anæsthetic.—Brit. M. J. 1910, v. 1, p. 562.

Davies, B. C., contributes a note on the menthol treatment of screw-worm and recommends the use of strong solutions.—J. Am. M. Ass. 1910, v. 54, p. 50.

Levaditi and Landsteiner assert that menthol may be used as an antiseptic in the prophylaxis of acute epidemic poliomyelitis.—Compt. rend. Soc. Biol. 1910, v. 68, p. 741.

Buckley, J. P., recommends a mixture of menthol, thymol and phenol in the aftertreatment of devitalized teeth.—Dental Cosmos, 1910, v. 52, p. 430.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 248–249) calls attention to a communication by Stepp (Klinisch-therap. Woch., 1910, No. 24) on the percutaneous application of menthol in the treatment of tuberculosis.

For additional references on the pharmacology and uses of menthol see J. Am. M. Ass. and Index Medicus.

METHYLIS SALICYLAS.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 132), reviewing the Ph. Ital. III requirements for artificial wintergreen oil, state that the specific gravity limits are incorrect; these limits should be from 1.185 to 1.190 at 15°.

Seidell, Atherton, reports experimental determinations on the solubility of methyl salicylate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 0.1 gm. of methyl salicylate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 67–69, 91.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 26) note that it is suggested to add the oils of gaultheria and sweet birch to the forthcoming Ph. Brit. In their own opinion, however, the inclusion of the cheaper synthetic methyl salicylate would be preferable to the pharmacist and equally satisfactory to the medical profession.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 142) state that pure synthetic wintergreen oil is at first colorless and only turns yellow with age. From 6 to 8 volumes of 70 per cent alcohol are required to give a solution.

Hall states that oil of wintergreen [methyl salicylate] while it has considerable odor has not the strong distinctive taste of oil of betula or gaultheria true.—Proc. Michigan Pharm. Ass. 1910, p. 70.

Davis, James E., reports that oil of betula is worth 3 times what methyl salicylate is, and oil of gaultheria is worth over double the price of oil of betula, and yet, all three of these articles test practically alike, except that oil of gaultheria always shows a slight rotation to the left (of 1° or less).—Proc. Michigan Pharm. Ass. 1910, p. 63.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 48) report on 6 samples of synthetic wintergreen oil: specific gravity from 1.1833 to 1.1903; refractive index about 1.533°; methyl salicylate 100 to 100.6 per cent; soluble in from 5 to 8 volumes of 70 per cent alcohol. All the samples were optically inactive; and, as a rule, small quantities of higher homologues were present.

METHYLTHIONINÆ HYDROCHLORIDUM.

Francis, J. M., reports that methylene blue is an article consumed in enormous quantities in pharmaceutical preparations and up to within the last six or eight months it has been somewhat difficult to obtain a product which was entirely free from zinc and other objectionable impurities.—Proc. Pennsylvania Pharm. Ass. 1910, p. 139.

Eldred, Frank R., asserts that much of the methylene blue on the market yields an amount of ash in excess of the official limit of 0.4 per cent; thirty-two lots have been found to yield from 0.4 per cent to 25.0 per cent of ash. The ash limit could be raised to 1 per cent, if zinc and arsenic were excluded by suitable tests.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 893.

Beilstein, Christian, reports that 8 lots of methylene blue were found which yielded amounts of ash varying from 0.5 to 2.5 per cent.—Proc. N. W. D. A. 1910, p. 107.

Bernegau, L. H., reports that of 8 samples of methylene blue examined, only 2 were strictly U. S. P., the other 6 containing from 14.1 to 22.9 milligrams of ash per 2 gm.—Proc. Pennsylvania Pharm. Ass. 1910, p. 139.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 29) report that commercial samples of methylene blue almost always contain zinc, and pharmacists using the dye for medicinal purposes should take care to employ the pure preparation.

Raubenheimer, Otto, describes the detection of methylene blue in urine. He points out that the methylene blue is soluble in chloroform but insoluble in carbon tetrachloride, and this fact can be used to distinguish it from indigotin.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 992–994.

Sinnatt, Frank Sturdy, discusses the use of methylene blue as an indicator in iodometric titrations.—Analyst, London, 1910, v. 35, pp. 309–310.

Osborne, Oliver T., asserts that the value of methylene blue as a genitourinary antiseptic is not so positive, and the staining of all tissues blue is of doubtful advisability. It can be given for a short time without any harmful effect, but it is used much less than it was a few years ago.—J. Am. M. Ass. 1910, v. 54, p. 377.

MEZEREUM.

LaWall and Bradshaw report finding 3.8 per cent ash in mezereum.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

An unsigned abstract (Hom. Envoy) commends mezereum for itching, scabby spots.—J. Am. Inst. Homœop. 1910, v. 2, p. 138.

MISTURÆ.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, pp. 119–120) presents a definition for mixture and enumerates and comments on those included in the Pharmacopœia and in the National Formulary.

MISTURA ACACIÆ N. F.

Whitney, Mrs. D. V., asserts that in mistura acaciæ, or mistura gummosa of the Ph. Germ., the sugar has a tendency to cause fermentation and she can see no practical use for this preparation.—Proc. Missouri Pharm. Ass. 1910, p. 105.

MISTURA ADSTRINGENS ET ESCHAROTICA N. F.

Whitney, Mrs. D. V., reports that she has had no difficulty in filtering Villates's solution.—Proc. Missouri Pharm. Ass. 1910, p. 105.

MISTURA AMMONII CHLORIDI N. F.

Whitney, Mrs. D. V., points out that in making the mixture of ammonia chloride the purified extract of glycyrrhiza should be used, as the U. S. P. extract of licorice makes a very unsightly preparation which shows a voluminous precipitate.—Proc. Missouri Pharm. Ass. 1910, p. 105.

MISTURA CAMPHORÆ AROMATICA N. F.

Whitney, Mrs. D. V., thinks that Parrish's mixture is an unsightly but rather pleasant smelling preparation.—Proc. Missouri Pharm. Ass. 1910, p. 106.

MISTURA CHLORALI ET POTASSII BROMIDI COMPOSITA N. F.

Whitney, Mrs. D. V., finds that in making chloral and bromide compound the addition of 30 cc. of fluid extract of glycyrrhiza and 10 cc. of saccharin [?] to the 1000 cc. makes a much more palatable remedy and also a clearer preparation.—Proc. Missouri Pharm. Ass. 1910, p. 106.

Claus, Otto F., thinks that mistura chlorali et potassii bromidi is a very strong and nauseating preparation, and states that unless sugar and water are added it is very unpleasant to take.—*Ibid.*, p. 33.

Lichthardt, G. H. P., asserts that the mixture of bromide and chloral compound has proven very unsatisfactory with him. He believes it could be improved by the addition of fluid extract of licorice.—Pacific Pharmacist, 1909–10, v. 4, p. 86.

The Budapest Correspondent (Lancet 1910, v. 178, p. 961) notes that "Bromidia" has been included in the Ph. Hung. III as mistura chloralo-bromata.

MISTURÆ CONTRA DIARRHŒAM N. F.

Whitrey, Mrs. D. V., asserts that of the 5 diarrhœa mixtures in the National Formulary, 2 are in very general use, the Sun mixture and the Squibb mixture.—Proc. Missouri Pharm. Ass. 1910, p. 106.

Weinstein, Abraham, expresses the belief that diarrhœa mixtures are very seldom now prescribed by physicians. He thinks it is time they should either be discarded altogether or the opium replaced by some other innocent ingredient.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1279.

MISTURA FERRI COMPOSITA.

Hommell, Philemon E., thinks that the compound mixture of iron should be eliminated from the Pharmacopœia as it is seldom called for. Other and better forms of iron have taken its place.—Merck's Rep. 1910, v. 19, p. 122.

MISTURA GLYCYRRHIZÆ COMPOSITA.

Caspari, Hynson, Thomas and others express the belief that the Tilyard formula for brown mixture is superior to the present U. S. P. formula.—Proc. Maryland Pharm. Ass. 1910, p. 160.

Thome, E. R., recommends using 100 cc. fluid extract of glycyrrhiza instead of pure extract of glycyrrhiza in brown mixture; also recommends omitting the acacia entirely. A beautiful clear preparation results.—Practical Druggist, 1910, v. 28, p. 123.

Hartz and McElhenie state that the addition of 5 cc. ammonia water to 1000 cc. compound mixture of glycyrrhiza will tend to fix the glycyrrhiza, neutralize any free acid in the mucilage and reduce the volume of sediment.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1270.

MISTURA GUAIACI N. F.

Whitney, Mrs. D. V., states that in making the mixture of guaiac the more thorough the preliminary trituration of the guaiac with the sugar, the better the preparation.—Proc. Missouri Pharm. Ass. 1910, p. 106.

MISTURA MAGNESIÆ ET ASAFŒTIDÆ N. F.

Meyer, Charles E., in making Dewees' carminative, uses a suitable bottle, graduated for the required amount of tincture of asafetida, and thus avoids the necessity of cleaning the graduate.—Proc. Missouri Pharm. Ass. 1910, p. 95.

MORPHINA.

Kerbosch, M. G. J. M., in a report on the formation and distribution of alkaloids in *Papaver somniferum* L. finds that the ripe plant contains morphine, codeine and narcotine in all of its organs.—Arch. Pharm. 1910, v. 248, pp. 536–567.

See also Pharm. Weekblad, 1910, v. 47, pp. 1062–1074, 1081–1094, 1106–1119.

Gehe & Co. (Handels-Bericht 1910, p. 123) discuss the economic conditions of the market in connection with morphine, and call attention to the provisions made by the Chinese Government restricting the importation of this article into China.

Reichard, C., calls attention to the development of volatile odorous principles in solutions of morphine.—Pharm. Zentralh. 1910, v. 51, p. 128.

Pschorr, R., and others, report studies on the chemistry of the morphine series.—Ann. Chem. 1910, v. 373, pp. 1–84.

Cohn, Georg, discusses the chemistry of morphine and some of its derivatives.—Pharm. Zentralh. 1910, v. 51, p. 316.

Eaton, E. O., outlines a simplified extraction method for the determination of morphine in opium and opium preparations.—Proc. Ass. Off. Agric. Chem. 1910, 27th Ann. Conv., pp. 188–189. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Winterstein, E., outlines a method for the quantitative estimation of morphine, by shaking an alkaline solution of morphine with chloroform and titrating.—Arch. exper. Path. u. Pharmakol. 1910, v. 62, pp. 139–144.

Gottlieb and Steppuhn present a contribution to our knowledge of the quantitative determination of morphine.—*Ibid.* 1910–11, v. 64, pp. 54–66.

Denigès, G., discusses a new reaction of morphine, without the intervention of concentrated acids, which may be used in the presence of various organic products, notably sugars.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 465–468. See also Compt. rend. Acad. sc. 1910, v. 151, pp. 1062; 1354.

Elvove, Elias, in a report of further studies in the application of the Volhard method to the estimation of alkaloids, calls attention to the possibilities of applying this method for the determination of morphine.—J. Am. Chem. Soc. 1910, v. 32, p. 136.

Rosenthaler and Görner report observations on the use of aromatic nitroderivatives as precipitants for alkaloids. For morphine, tetranitrophenolphthalein and hexanitrodiphenylamine are more sensitive than picric acid.—Ztschr. anal. Chem. 1910, v. 49, p. 348.

Jörgensen, Gunner, discusses the determination of morphine in the animal organism.—*Ibid.* pp. 484–486.

Sanger and Boughton present a method for the estimation of morphine in cases of poisoning.—J. Biol. Chem. 1910, v. 7, p. xxxvii.

Hoover, G. W., in discussing the determination of morphine in complex drug products, states that all known methods which have been employed for the determination of morphine quantitatively have been tried. The shake-out method with chloroform-alcohol, as proposed by several workers, has been modified so that it gives satisfactory results.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 182. (Bull. Bur. Chem. U. S. Dept. Agric., 1911, No. 137).

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 49) report that the purity of the samples of morphine tested, fell between 98.3 and 100 per cent. A sample of pure undried alkaloid gave the following comparative values when titrated with the indicators mentioned: methyl orange, 99.7 per cent; tincture of cochineal, 98.2 per cent. Phenolphthalein is useless; in the absence of organic coloring matter methyl orange gives results nearer to the truth.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 78, September 5, p. 8) comments on the anti-morphine ordinance adopted August 26th by the Board of Health in New York City. See also Practical Druggist, 1910, v. 28, pp. 113–114.

An editorial (Meyer Bros. Drug. 1910, v. 31, p. 131) comments on the Cullom bill for the regulation of the sale of habit-forming drugs.

Koch, Christopher, asserts that 75 per cent of the morphine consumed in this country is used by drug habitués.—Proc. Pennsylvania Pharm. Ass. 1910, p. 198.

Kebler, L. F., believes that more than 90 per cent of the morphine and cocaine sold in this country is used for illegitimate purposes.—Proc. N. W. D. A. 1910, p. 29.

Abstracts from London papers call attention to the widespread habitual use of morphine in England, particularly in London.—Brit. & Col. Drug. 1910, v. 58, p. 204.

Miller, H. Crichton, discusses the treatment of morphinomania by the combined method, medicinal and moral.—Brit. M. J. 1910, v. 2, p. 1595. See also *Ibid.* p. 2007.

The editor of the Therapeutics Column (J. Am. M. Ass. 1910, v. 54, p. 794) discusses the drug treatment of morphine habitués, with special reference to the method published by Alexander Lambert.

Zeelen, Victoire, reports observations on the combined opium alkaloids and discusses the action of combinations of morphine with codeine and with other alkaloids.—Ztschr. exper. Path. u. Therap. 1910, v. 8, pp. 576–600.

McCrudden, Francis H., reports a study on the elimination of morphine under the influence of intestinal local irritants.—Arch. exper. Path. u. Pharmakol. 1909–10, v. 62, pp. 374–379.

Hunt, Reid, in a report on the effects of a restricted diet and of various diets upon the resistance of animals to certain poisons, points out that diet causes distinct but not very marked differences in the resistance to morphine.—Bull. No. 69, Hyg. Lab. U. S. P. H. & M.-H. S. 1910. pp. 93.

For additional references on the chemistry, pharmacology, toxicology and uses of morphine and its derivatives see Chem. Abstr., Zentrbl. Biochem. u. Biophysik., J. Am. Ass. and Index Medicus.

MORPHINÆ ACETAS.

Brown, Linwood A., states that morphine acetate gives off acetic acid, and is converted into the insoluble alkaloid, especially if the bottle contains alkali, as some cheap glassware is liable to do.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 151.

Brady, William, states that acetate of morphine is preferable to the sulphate because it is more soluble, and its yellowish color deceives over suspicious patients. A tablet triturate of morphine acetate dissolved in a tablespoonful of hot water and given by the mouth will often obviate the use of the hypodermic syringe.—N. York M. J. 1910, v. 91, p. 211.

MORPHINÆ HYDROCHLORIDUM.

Dohme and Engelhardt state that in the Ph. Hung. III only morphine hydrochloride is official.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

Ribaut, H., criticizes the Ph. Fr. V method of assay for morphine which, he says, is incorrectly expressed. He questions the necessity for a test of apomorphine, as he has never found a trace of it in morphine hydrochloride.—Bull. sc. pharmacol. 1910, v. 17, pp. 213–215.

MORPHINÆ SULPHAS.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 49) report that 2 samples of morphine sulphate tested gave a marked acid reaction to litmus, which on titration was found to be equivalent to 0.34 and 0.5 per cent free sulphuric acid.

NONOFFICIAL COMPOUNDS.

Hunt, Reid, reports that ethyl morphine hydrochloride is included in the Ph. Germ., Ph. Mex., Ph. Helv.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

Mossler, Gustav, discusses the production of ethylmorphine hydrochloride, its physical and chemical properties and outlines tests for identity and purity.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, p. 14.

Zeelen, Victoire, reports observations on the influence of dionin on the action of morphine.—Ztschr. exper. Path. u. Therap. 1910, v. 8, p. 592.

Hensel, Otto, recommends the use of dionin alone or dionin in combination with hyoscine in the treatment of the morphine habit.—Merck's Arch. 1910, v. 12, p. 156.

The Budapest Correspondent (Lancet, 1910, v. 178, p. 961) notes that æthylmorphinum hydrochloricum, known commercially as dionin, is extensively used in opthalmology and has been added to the Ph. Hung. III.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 167–170) reviews some of the recent literature on dionin.

See also under Diacetylmorphine.

MOSCHUS.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 147) present a table showing the exports of musk from Shanghai from 1899 to 1909.

See also *Ibid.* October 1910, p. 152.

Berger, Fr. (Zentralbl. f. Pharm. 1910, p. 466) reports on a remarkable sample of musk, which lost within one year nearly 52.92 per cent of its original weight.—Apoth. Ztg. 1910, v. 25, p. 684.

Mittelbach, William, asserts that musk is of little value and probably only admitted through custom. It is one of the old ones that has never been of much utility and ought to be dropped.—Proc. Missouri Pharm. Ass. 1910, p. 98.

Hemm, Francis, states that he has not had a prescription for musk since the U. S. P. VIII became official, and for some years prior thereto.—*Ibid.* p. 101.

Havenhill, L. D., outlines a modified formula for the tincture of musk.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 789.

MUCILAGINES.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, pp. 118–119) discusses the mucilages of the Pharmacopœia and expresses the belief that at least two of these, elm and sassafras pith, could be omitted.

For comments on official mucilages see under respective drug headings.

MYRISTICA.

The Chem. & Drug. (1910, v. 77, p. 291) summarizes a recent article on nutmegs from the Barbados Agricultural News.

DuBois, James T., reports that for the first nine months of 1910, the Straits Settlements exported a total of 435 tons of nutmegs, of which 289 tons went to the United States, a decrease of 305 tons.—Cons. & Tr. Rep. 1910, p. 1164. See also pp. 7, 67, 209, 1071.

LaWall and Bradshaw report finding from 1.5 to 2.5 per cent ash in nutmegs.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Lind, G. D. (West Virginia M. J. September 1910), reports a case of poisoning, in a boy, from eating five or six nutmegs; recovery.—J. Am. M. Ass. 1910, v. 55, p. 1148.

Wilson, M., thinks the toxic action of nutmeg is due to a partial germination of the seed.—*Ibid.* v. 54, p. 441.

MYRRHA.

Parry, Ernest J., in notes on some perfume resins, describes myrrh, refers to its origin and history, discusses its constituents and reports on the examination of myrrh.—Am. Perf. 1910–11, v. 5, pp. 4–5.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 41) point out that the Ph. Germ. V requires that myrrh leave not more than 65 per cent of substance insoluble in hot alcohol and yield on incineration not more than 7 per cent of ash. In the making of powder, myrrh is to be dried over calcined lime.

Breves, Rudolph, thinks that for myrrh the amount soluble in alcohol and water and the ash should be stated.—Practical Druggist, 1910, v. 28, p. 39.

LaWall and Bradshaw report finding 3.02 per cent ash in myrrh.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Eldred, Frank R., reports that twenty lots of crude myrrh averaged about 58 per cent of material insoluble in alcohol, and about 32 per cent of alcohol-soluble material (dried for one hour on a water bath); this leaves about ten per cent of material volatilizing under these conditions. The largest residue insoluble in alcohol was 74 per cent, the smallest 52 per cent. The ash averaged 8 per cent, the lower and upper limits being 4 and 14 per cent. Eleven lots of powdered myrrh varied from 29 to 53 per cent of alcohol-soluble material, the average being about 35 per cent. The ash averaged about 11 per cent, and varied from 5 to 16 per cent.—*Ibid.* p. 893.

Woolsey, J. F., thinks that the statement that myrrh does not "swell or dissolve" in water is hardly tenable in view of the fact that it contains water soluble matter to the extent of 40 to 60 per cent.—Proc. Pennsylvania Pharm. Ass. p. 140.

Bernegau, L. H., reports on 13 samples of myrrh which contained from 18.30 to 37.60 per cent alcohol soluble matter; and from 1.14 to 18.00 per cent of ash. He suggests that the U. S. P. prescribe limits for alcohol soluble matter and ash.—*Ibid.* p. 140.

Scoville, W. L., reports that 7 lots of myrrh ranged from 35 to 44.7 per cent alcohol soluble matter.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 744.

Gane, E. H., says that much of the whole gum imported contains a varying proportion of gum acacia, probably due to careless collecting.—*Ibid.* p. 744.

Havenhill, L. D., outlines a modified formula for the tincture of myrrh.—*Ibid.* p. 789.

Jaffa, M. E., reports the examination of 1 sample of tincture of myrrh; illegal.—Bull. California Bd. Health, 1910, v. 6, p. 36.

NAPHTHALENUM.

Menge, George A., in a study of melting point determinations, reports on five samples of naphthalene which were found to melt at from 79.9° to 80.5°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, p. 92. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1042.

NITROUS OXIDE.

Hunt, Reid, reports that nitrous oxide is included in the Ph. Mex.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

McMechan, F. Hoeffer, describes and illustrates several new forms of apparatus for the administration of anæsthetics.—Boston M. & S. J. 1910, v. 162, pp. 273–276.

Scott, T. Graham, describes and figures a combined oral and nasal nitrous oxide inhaler.—Lancet, 1910, v. 179, p. 1222.

See also Coleman, F., *Ibid.* p. 1840, and Rood, Felix, Brit. M. J. 1910, v. 1, p. 1554.

Crile, George W., reports an experimental and clinical research into nitrous oxide and ether anæsthesia. He has administered nitrous oxide 575 times for major operations.—J. Am. M. Ass. 1910, v. 54, p. 233.

Haggard, William D., presents a paper on nitrous oxide and oxygen anæsthesia.—*Ibid.* v. 55, p. 2225.

See also Gatch, Willis D., *Ibid.* v. 54, pp. 775–780 and Peairs, Ralph P., pp. 1422–1424.

Lydston, G. Frank, reports a death under gas and oxygen anæsthesia.—Med. Rec. 1910, v. 78, p. 866.

Bancroft, Frederic W., presents some notes on the present status of nitrous oxide in surgery.—J. Am. M. Ass. 1910, v. 54, p. 1589.

A number of additional references on the use of nitrous oxide will be found in the Index Medicus.

NUX VOMICA.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 56) point out that the Ph. Germ. V requires that nux vomica yield not more than 3 per cent of ash and contain at least 2.5 per cent of alkaloids. Fromme expresses the belief that the modified assay method is an improvement over that included in the Ph. Germ. IV.

Dohme and Engelhardt state that the Ph. Hung. III directs that nux vomica contain 2.5 per cent of total alkaloids.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1188.

Goris, A., criticises the Ph. Fr. V with reference to the strychnos preparations described therein.—Bull. sc. pharmacol. 1910, v. 17, pp. 664–666.

Tunmann, O., reports a study of the presence of alkaloids in the germinating seed of nux vomica.—Arch. Pharm. 1910, v. 248, pp. 644–657.

Dop, Paul, presents a note on the *Strychnos* of oriental Asia.—Compt. rend. Acad. sc. 1910, v. 150, p. 1256.

LaWall and Bradshaw report finding from 0.9 to 10 per cent ash in nux vomica.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Rusby, H. H., states that he has met with small and worthless nux vomica seeds which had been rolled in a mixture of clay and some sticky substance to bring them up to a fair size and deceptive appearance.—Practical Druggist, 1910, v. 27, p. 424.

Beal, George D., states that the common adulterant of nux vomica is ground olive pits, but a new one is coming into use. This is the raspings of the vegetable ivory nut.—Proc. Ohio Pharm. Ass. 1910, p. 72.

Caesar & Loretz (Jahres-Ber. 1910, pp. 119–120) outline the Keller-Fromme method for the assay of nux vomica, also call attention to alkaloid and ash content requirements embodied in the recently published foreign pharmacopœias.

Dohme and Engelhardt record the assay methods for nux vomica as given in thirteen of the foreign pharmacopœias.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 836–840.

Lyons, A. B., reports a comparison of the requirements and methods of assay for nux vomica included in the various pharmacopœias.—Am. Druggist, 1910, v. 56, p. 104.

Goris and Wirth suggest the international unification of methods for the assay of extract of nux vomica.—Compt. rend. Congr. Internat.

Pharm. 1910 (Brussels, 1911), pp. 111–116. See also Bull. sc. pharmacol. 1910, v. 17, pp. 515–520.

Hoover, G. W., points out that a review of the cooperative work done in connection with the assay of drugs shows a variation of 10 per cent of strychnine in nux vomica based on the amount present as 100 per cent.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 182. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Kebler, Lyman F., in a review of the present status of drug assays, points out that in the case of nux vomica, the variation in three different reports was less than 10 per cent, and in two other reports it exceeds slightly 15 per cent, while in two additional reports the variation reaches almost 20 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 858.

Scoville, W. L., points out that the U. S. P. assay for nux vomica forms emulsions very easily which are best avoided by the use of stronger acid for extraction.—*Ibid.* pp. 822–823.

Clark, Albert H., comments on the U. S. P. method of assay. It seems to him that an investigation as to the temperature at which oxidation takes place would bring forth fruitful results.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 124.

Rippetoe, John R., suggests a modification for the assay of fluid extract of nux vomica.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1061-1062.

Evans Sons Lescher & Webb (Analytical Notes, 1910, pp. 51–52) present a modified assay method which they find to be accurate, rapid and convenient.

Elvove, Elias, in a report of further studies in the application of the Volhard method to the estimation of alkaloids, calls attention to the possibilities of applying this method for the determination of brucine.—J. Am. Chem. Soc. 1910, v. 32, p. 138.

Engelhardt, Hermann, reports that while samples of nux vomica with 5.5 per cent of total alkaloids were not infrequent, he received 4 samples out of 17 which did not come up to the required percentage of strychnine.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1258.

Sayre, L. E., reports on 23 samples of nux vomica: 6 passed; 17 illegal.—*Ibid.* p. 1097.

Table showing some reported variations in strychnine content of nux vomica.

Reporters.	Number of samples.	Per cent of strychnine.		References.
		Minimum.	Maximum.	
Eldred, Frank R	10	1.27	1.58	Proc. Am. Pharm. Ass. 1910, v. 58, pp. 893–894.
Patch, E. L.	9	0.93	1.28	*Ibid.* p. 744.
Vanderkleed, Chas. E	17	1.00	1.39	Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Lyons, A. B., calls attention to market samples of extract of nux vomica labeled to contain 5 per cent strychnine, which actually assayed from 4.32 to 7.2 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 739–740.

Thome, E. R., thinks that acetic acid is not necessary in the formula for fluid extract of nux vomica.—Practical Druggist, 1910, v. 28, p. 122.

Beringer, G. M., states that his experiments convince him that acetic acid extracts a great deal of gelatinous extractive that is objectionable.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 781.

Sayre, L. E., reports on 2 samples of fluid extract of nux vomica: both illegal.—*Ibid.* p. 1097.

Knight, Henry G., reports the examination of 7 samples of fluid extract of nux vomica; 6 not passed.—Rep. Dairy, Food & Oil Com., Wyoming, 1910, p. 63.

Brown, Linwood A., points out that owing to the slight solubility of sugar of milk in strong alcohol, tincture of nux vomica sometimes becomes turbid, caused by the sugar of milk used as a diluent in the extract of nux vomica. This tincture should be dispensed perfectly clear.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 162.

Hereth, F. S., suggests that the Pharmacopæia direct that tincture of nux vomica be made from the assayed fluid extract rather than the extract.—Practical Druggist, 1910, v. 28, p. 64.

Clayton, Charles, suggests that tincture of nux vomica be directed to be made from the drug, as the powdered extracts on the market vary much in color.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 375.

Tomczak, Walter C., thinks the present way of compounding tincture of nux vomica takes too long and presents a modification which he asserts does away with the trouble of dissolving the extract and thus saves a lot of time.—Proc. New York Pharm. Ass. 1910, pp. 221–222.

Beringer, George M., has tried making tincture of nux vomica from the commercial extract and asserts that results have been all colors and appearances and all precipitated, some very much more than others.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 782.

Havenhill, L. D., outlines a modified formula for the tincture of nux vomica.—*Ibid.* p. 789.

Dohme and Engelhardt state that the Ph. Hung. III directs that tincture of nux vomica should contain 0.25 per cent of total alkaloids, determined by a process similar to that given for nux vomica.—*Ibid.* p. 1193.

Table showing some of the analytical results reported in connection with tincture of nux vomica.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Sayre, L. E	4	0	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.
Sayre, L. E	19	10	Bull. Kansas Bd. Health, 1910, v. 6, p. 206.
Beal, George D	6	4	Proc. Ohio Pharm. Ass. 1910, p. 73.
Knight, Henry G	6	4	Rep. Dairy, Food & Oil Com., Wyoming, 1910, p. 63.

Monroe, A. Leight, quotes Lutze who thinks nux vomica is indicated if the nervous system is too much affected and irritated, * * * also if menses appear too early or continue too long.—Hahnemann. Month. 1910, v. 45, p. 72.

An abstract (Medical Summary) asserts: "Nux is one of our best remedies to overcome impaired digestion and sluggishness of the bowels which so often accompanies eye disturbances. Chronic eye diseases, with an atonic state of the system and general debility, will be improved by nux."—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 246.

An unsigned abstract (Hom. Envoy) recommends nux vomica for "worse in the morning."—J. Am. Inst. Homœop. 1910, v. 2, p. 138.

Adams, F. X., points out that nux vomica is indicated by: pain in the abdomen, radiating from the umbilicus. Nausea inclined to emesis, borborigmus, flatulence, white ring around the mouth; dropping of angles of the mouth; diarrhœa, stools thin, yellow sometimes watery; tongue broad, yellow coating.—Eclectic M. J. 1910, v. 70, p. 74.

OLEATA.

Raubenheimer, Otto, recommends the use of sesame oil in the making of the official oleates.—Proc. New York Pharm. Ass., 1910, p. 194.

Mittelbach, Wm., thinks that oleates are easily made, and should be retained.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 792.

Hallberg, C. S. N., asserts that zinc oleate is obtained as a light fluffy powder if the solutions are diluted and cold, and this is the desideratum.—Bull. Am. Pharm. Ass., 1910, v. 5, p. 28.

OLEORESINA CUBEBÆ.

Noyes, Reinold, states that the oil of cubebs is more expensive than the oleoresin, but the oleoresin contains all of the oil in the berries and the resin as well, and it seems to him to be preferable.—Proc. Minnesota Pharm. Ass., 1910, p. 75.

OLEA INFUSA.

Raubenheimer, Otto, suggests the use of oil of sesame in making the infused oils of the National Formulary.—Am. J. Pharm. 1910, v. 82, p. 480. Also Proc. New York Pharm. Ass., 1910, p. 194, and Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1231–1232.

OLEA PINGUA.

Hefter, Gustav, reviews the literature of 1909 relating to the manufacture and chemistry of fats and oils.—Chem. Ztg. 1910, v. 34, pp. 846–848.

Wesson, David, discusses the bleaching of oils with Fuller's earth.—Tr. Am. Inst. Chem. Eng., 1910, v. 3, pp. 327–332.

Der Pflanzer presents a number of supplements in which the cultivation of seeds for oil is discussed. Among the articles published in 1910 are the cultivation of sesame (No. 6), Soja bean (No. 9), and peanut (No. 10).

Bird and Lucas discuss the oils, fats, and waxes of the Ph. Brit. and suggest a number of monographs.—Pharm. J. 1910, v. 31 (85), pp. 468–474, 489. See also Chem. & Drug. 1910, v. 77, pp. 591–594, 588, and Brit. & Col. Drug., 1910, v. 58, pp. 313–317.

An editorial (Pharm. J. 1910, v. 31 (85), p. 461), commenting on the contribution of Bird and Lucas with reference to the official oils, fats, and waxes, expresses the opinion that the authors are aiming too high; it is an open question whether the purpose of the pharmacopœia would not be subverted by the inclusion of so much matter which more properly belongs to the department of the scientific chemist and analyst than to that of the pharmacist.

The Chem. & Drug. (1910, v. 77, p. 797) presents a table of the factors suggested by Lucas and Bird for Ph. Brit. oils, fats, and waxes, as compared with the factors given in Squire's Companion.

Hill, Charles Alex., commenting on the recommendations of Bird and Lucas, suggests that the refractive index be determined at 40° instead of 15°.—Pharm. J. 1910, v. 31 (85), p. 780.

Harvey and Wilkie discuss the refractive index of fixed oils, methods and results of a large number of determinations. They think these characters are of considerable diagnostic value and might well be included in the pharmacopœia.—Chem. & Drug. 1910, v. 76, p. 442.

Sage, C. Edward, supplements his earlier paper [See Bulletin No. 79] on the vegetable oils of the pharmacopœia by a note on the refractive indices, in which he shows the difficulty in proving adulteration by means of a refractometer reading if the admixture is one of the usual adulterants.—Pharm. J. 1910, v. 30 (84), p. 204.

Marcille, R., in discussing the analysis of oils, presents some observations on the determination of the iodine number by the Hübl method as compared with the method outlined by Wijs.—Ann. Falsif. 1910, v. 3, pp. 417–422.

Dorsman and van der Wielen review the various pharmacopœial methods for determining the iodine number of fatty oils and report a number of experiments, showing the variations in the results obtained by the several methods.—Pharm. Weekblad, 1910, v. 47, pp. 828–839.

Riedel's Berichte (1910, p. xxv) suggests the inclusion of acid number and ester number in connection with fats, oils and balsams. Also suggests that these factors be included in a separate table.

An abstract (Bull. Sc. Pharmacol. 1909, memoires origines 654) discusses the use of antipyrine in the determination of the Hübl iodine number of fatty and volatile oils.—Pharm. Zentralh. 1910, v. 51, pp. 623–624.

Rosenthaler, L., presents some observations on the use of the Halphen reaction.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 20, pp. 453–454.

Bruno, Albert, describes a method for the accurate determination of total soluble acids in fats and fatty oils.—Ann. Falsif. 1910, v. 3, pp. 238–239.

Louise, E., reports on a novel method of analysis by means of miscibility curves and its application to oils used as food.—*Ibid.*, pp. 8–13.

Royer, J., discusses some of the color reactions of oils.—*Ibid.*, pp. 380–385.

Lucas and Bird outline methods for the determination of the saponification value, iodine value, free acid, and unsaponifiable matter present in fixed oil.—Brit. & Col. Drug., 1910, v. 58, p. 317.

Mayer, J. L., suggests the inclusion of the Hehner method of ascertaining the iodine number of oils in place of the Hübl method.—Am. Druggist, 1910, v. 57, p. 385.

Eisenschiml and Copthorne discuss the detection of fish oils in vegetable oils, and outline a bromine-acetic acid test for detecting fish oils that have not been boiled.—J. Ind. & Eng. Chem., 1910, v. 2, pp. 43–45.

Bryan, T. J., reports collaborative work on the detection of fish oil and of palm oil in other oils.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., pp. 87–91. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Evans, J., points out that the determination of the specific gravity and the application of a few color tests give, as a rule, a fair criterion of the purity of fixed oils. Chemists should not rely too much upon such endings as "sub," "puris," "opt," etc. In a recent olive oil prosecution the defendant stated that he ordered "olive oil sub." On appealing to the wholesale dealer it turned out that the magic word "sub" meant substitute.—Brit. & Col. Drug., 1910, v. 57, p. 133.

Hepburn, Joseph Samuel, concludes his contribution on the critical study of the natural changes occurring in fats and oils, and presents a comprehensive bibliography on the subject.—J. Frankl. Inst. 1910, v. 169, pp. 23–54.

Conradson, P. H., discusses laboratory tests of lubricants, and describes and illustrates a number of viscosimeters.—J. Ind. & Eng. Chem., 1910, v. 2, pp. 171–181.

Raubenheimer, Otto, calls attention to the possible use of oil of sesame in pharmacy and enumerates some of its advantages over cotton seed and olive oil.—Am. J. Pharm. 1910, v. 82, pp. 476–481. See also Proc. New York Pharm. Ass., 1910, pp. 189--195, and Western Druggist, 1910, v. 32, pp. 557–559.

Forrester, G. P., reviews the occurrence of oil of sesame in the several pharmacopœias, and presents a number of formulas illustrating the various uses to which this oil is put.—Chem. & Drug. 1910, v. 76, p. 581. See also Rev. Am. Farm. y Med. 1909–10, v. 14, pp. 305–306.

An unsigned article (Am. Druggist, 1910, v. 56, p. 358) points out that sesame oil is readily gaining recognition in many recent pharmacopœias as a substitute for olive oil, and calls attention to the origin and some of the uses of sesame oil.

Fleig, C., discusses the recognition of sesame oil by its color reactions with aromatic aldehydes.—Rép. pharm. 1910, v. 22, pp. 147–153.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 15) report that 3 samples of sesame oil have been tested during the year, 1 of which gave strongly marked reactions for cotton seed oil; the figures for the other 2 were: specific gravity 0.9225 and 0.9230; saponification value 188.8 and 189.4.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 68) report that an abnormal sample of sesame oil had a specific gravity of 0.923; refractive figure +21°; iodine value (Hübl.) 111.4; saponification value 182. The oil was apparently of very recent expression, and neither soya bean oil, nor any other adulterant could be detected.

Breves, Rudolph, suggests that Oleum Arachidis be introduced in the new pharmacopœia.—Practical Druggist, 1910, v. 28, p. 39.

An unsigned article (Bull. Imp. Inst. 1910, v. 8, pp. 153–172) discusses the cultivation, preparation and utilization of the ground nut.

Derlin, L., reports the examination of a number of samples of peanut oil.—Apoth. Ztg., 1910, v. 25, p. 210.

The Executive Committee of the British Pharmaceutical Conference points out that the oil of soya bean has become an important article of commerce and asks if it can be utilized in pharmacy.—Year-Book of Pharmacy, 1910, p. 297.

OLEA VOLATILIA.

Rabak, Frank, discusses the production of volatile oils and perfumery plants in the United States and describes, with illustrations, the methods used in extracting the aroma of the plants.—Bull. No. 195, Bur. Plant. Ind., U. S. Dept. Agric., 1910, pp. 55. Also Am. Perf. 1910–11, v. 5, pp. 219–224.

Kremers, Edward, calls attention to the distillation of volatile oils of wormwood in Wisconsin and states that 100 acres of wormwood were employed in a single season in the distillation of this oil.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1295.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 11) present a table showing the imports and exports of essential oils into and from the United States in the second half years of 1909 and 1908.

They also (*Ibid.*, October 1910, p. 11) present a table showing the imports and exports of essential oils into and from the United States in the first half-years of 1910 and 1909.

Roure-Bertrand Fils (Sc. & Ind. Bull., April 1910, pp. 5–12) present tables showing the value of imports and exports of essential oils in several countries.

Noyes, C. Reinold, discusses the volatile oil market from a scientific point of view (reproduced from Northwestern Druggist).—Pharm. J., 1910, v. 31 (85), pp. 635–636, 759–760. Also Am. Druggist, 1910, v. 57, pp. 206–210.

An unsigned article (Am. Perf. 1910–11, v. 5, pp. 180–181) discusses the Messina oil situation.

Rochussen, F., reviews the progress made in connection with volatile oils and perfumes.—Ztschr. ang. Chem., 1910, v. 23, pp. 1496–1504. See also Chem. Ztg., 1910, v. 34, pp. 385–387, 407–411.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 152–189, and October 1910, pp. 155–203) present a review of some of the recent literature relating to volatile oils.

Heinrich Haensel (Bericht, April–September 1910, pp. 55–78 and October–March 1909–10, pp. 53–77) presents a review of the literature relating to volatile oils.

Roure-Bertrand Fils (Sc. & Ind. Bull. April 1910, pp. 85–147, and October 1910, pp. 77–151) review some of the recent literature relating to perfumes and essential oils.

Klimont, J., reviews the work of Wallach on the chemistry of the terpenes.—Oesterr. Chem.-Ztg. 1910, v. 13, pp. 286–287.

Wallach, O., presents some additional contributions to our knowledge of the chemistry of essential oils.—Ann. Chem., 1910, v. 369, pp. 63–103, ff.

Semmler, F. W., presents additional contributions on the composition of volatile oils.—Ber. deutsch. chem. Gesellsch., 1910, v. 43, pp. 445–448, ff.

Böcker, E., discusses terpene and sesquiterpene free volatile oils and presents a comparative table showing the properties of natural and terpene and sesquiterpene free volatile oils.—J. prakt. Chem., 1910, v. 81, pp. 266–281.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 158) call attention to the second edition of the volume on volatile oils by Gildemeister and Hoffmann, which, owing to an enormous increase of subject-matter, is being published in a two volume edition.

For book reviews see Am. J. Pharm. 1910, v. 82, p. 581, Midl. Drug. 1910, v. 43, p. 673 and Pharm. Zentralh. 1910, v. 51, p. 1003.

An editorial (Chem. & Drug. 1910, v. 76, p. 776) calls attention to the treatise by von Rechenberg on the theory of the production and separation of ethereal oils by distillation, which forms a part of the second edition of Gildemeister and Hoffmann. See also Am. J. Pharm. 1910, v. 82, p. 345.

A book review (Ber. pharm. Gesellsch., 1910, v. 20, p. 509) calls attention to a recently published book on the volatile oils, their production, examination and composition, by Robert Limebach and published by Wilhelm Knapp, Halle a/S.

Andresen, S., in a review of the Ph. Svec. IX, points out that volatile oils, in keeping with the practices of the Ph. Dan., are designated as Aetherolea.—Apoth. Ztg. 1910, v. 25, p. 29.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 124–127) review the Ph. Hung. III requirements for essential oils. Likewise (pp. 127–133) the Ph. Ital. III and (pp. 133–141) the suggestions that have been made for the revision of the Ph. Brit., and the discussion on essential oils at the Second International Congress of the White Cross.

The proposed standards for volatile oils discussed at the Second International Congress for the suppression of fraud are reprinted.—Oesterr. Chem.-Ztg. 1910, v. 13, pp. 30–31.

Jeancard and Satie discuss the recognition of essential oils in pharmacopœias, and present a table showing the number of essential oils admitted in several pharmacopœias and the frequency with which some of the more essential oils are recognized.—Am. Perf. 1910–11, v. 5, pp. 139–141, 152, 158–159.

Franz Fritzsche & Co. think the pharmacopœia should not contain essential oils which in the modern sense are of use only for perfuming purposes, even although they are used in certain instances for aromatizing medical substances and preparations.—Chem. & Drug. 1910, v. 76, p. 372.

Pearson and Sechler discuss the standards for the volatile oils of the U. S. P.—Merck's Rep., 1910, v. 19, pp. 44–46.

Jeancard and Satie discuss the volatile oils of the U. S. P.—Am. Druggist, 1910, v. 56, pp. 40–43.

An editorial (Am. Perf. 1910–11, v. 5, p. 24), in discussing pharmacopœial standards, states that it is a notorious fact that the U. S. P. is very faulty in this regard, to say the least. Many oils, admittedly impure, will meet U. S. P. requirements, while others of undoubted purity fail to do so.

Kremers, Edward, states that some of the worst things in the Pharmacopœia about volatile oils were things demanded by so-called manufacturers. They thought the Pharmacopœia was a very inoffensive book at that time; that it did not do any harm, and suited a certain demand.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 975.

An editorial (Am. Perf. 1910–11, v. 5, p. 176), commenting on the revision of the U. S. P., states that there is plenty of room for improvement, and the nature of the book should be such as to make the U. S. P. a model for other nations.

Brinton, C. S., thinks that the present U. S. P. standards for volatile oils are not satisfactory. They should be broadened and made better by the introduction of more accurate methods for detecting adulterants.—Drug Topics, 1910, v. 5, p. 108.

Kremers, Edward, suggests the impracticability of framing pharmacopœial standards for volatile oils, so as to admit all volatile oils that are unquestionably pure.—Midl. Drug. 1910, v. 44, p. 2.

Parry, E. J., thinks it should be clearly indicated whether the pharmacopœial standards are intended to be absolute or merely restrictive; whether the monographs include all pure oils, or whether they include certain oils and exclude others.—Pharm. J. 1910, v. 30, (84) p. 181.

The Perfumery and Essential Oil Record raises the question, should the pharmacopœia make restrictive monographs whilst employing generally accepted titles.—*Ibid.*, p. 304.

Jeancard and Satie state that no essential oil can be defined by color, odor or its Latin name. The designation of the plant, the part treated, method of preparation and lastly the physico-chemical constants constitute the true characteristics.—Am. Perf. 1910–11, v. 5, p. 141.

E. Sachsse & Co. think that the outlining of a distilling process in connection with the requirements for volatile oils can very easily give rise to wrong conclusions. They believe that other tests should suffice to prove the good quality of an oil.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Dodge, Francis D., discusses the analysis of essential oils and expresses the belief that no tests or combination of tests have yet been arranged which will absolutely guarantee the purity of a given sample of oil.—Am. Perf. 1910–11, v. 5, pp. 99–100.

Hill, C. A., in introducing the report on essential oils, makes some interesting and significant comments on their adulteration and the function of the pharmacopœia in connection therewith. The two important considerations which have guided him and Umney in the work are (1) to obtain the maximum of therapeutic value with (2) the acceptance of normal and natural distillates.—Pharm. J. 1910, v. 30, (84) p. 177. Also Chem. & Drug. 1910, v. 76, p. 271.

Kleber, Clemens, thinks there should be a differentiation between "pure" oils and oils for medicinal use, and that for the latter narrow limits for variability should be set.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 94.

Noyes, Reinold, asserts that the so-called close buyer gets no more than his money's worth. It is this class that has created the number of adulterations by their demand for something cheaper.—Proc. Minnesota Pharm. Ass. 1910, p. 78.

A paper by Hill and Umney on the essential oils of the Pharmacopœia with the proposed monograph to be included in the Ph. Brit., is reprinted entire.—Brit. & Col. Drug. 1910, v. 57, pp. 108–110.

A number of comments on the standards proposed by Hill and Umney are reprinted.—*Ibid.*, pp. 240–241.

An editorial (Lancet 1910, v. 178, p. 586) calls attention to the recent communication by Hill and Umney on the essential oils of the Ph. Brit. See also Pharm. J. and Chem. & Drug.

The Chemist & Druggist (1910, v. 76, pp. 398–400) publishes a tabulated comparison of the characters of essential oils as given by the Ph. Brit., Squire's Companion, Hill and Umney, Parry and other authorities. See also *Ibid.* p. 477.

Henderson, H. John, criticises the proposed essential oil monographs as submitted by Umney and Hill.—Year-Book of Pharmacy, 1910, pp. 383–391.

A discussion on the proposed monographs for essential oils is reported.—*Ibid.*, pp. 391–395. See also Pharm. J. 1910, v. 31 (85), pp. 138–140, and for discussion, p. 174.

The Chem. & Drug. (1910, v. 77, pp. 551, 553) contrasts the figures of Hill and Umney with those of the Ph. Fr. V, Ph. Helv. IV, and U. S. P. VIII. There is also a résumé of the French and Swiss general tests applicable to essential oils.

Hill and Umney, replying to criticisms, make a number of suggestions as to the constants, and methods of their determination, for the essential oils of the Ph. Brit.—Chem. & Drug. 1910, v. 77, p. 511.

Pearson and Sechler discuss methods for applying odor tests to volatile oils.—Merck's Rep. 1910, v. 19, p. 46.

Remington, Joseph P., thinks that a highly trained nose is more important in determining the value of volatile oils than most of the chemical examination. He favors some form of dilution odor test.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 108.

Allen, W. Watlock, remarks that as the "characteristic odor" is mentioned in almost every monograph, a direction to make this observation by smelling one or two drops of the oil placed on filter paper might well be added.—Pharm. J. 1910, v. 30, (84) p. 317.

Jeancard and Satie think that the odors of essential oils are impossible of description, for we lack absolutely the terms whereby comparison can be fixed.—Am. Perf., 1910–11, v. 5, p. 141.

Seil, H. A., does not consider the solubility of an oil of much importance as it is a poor indicator of sophistication.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 94.

Jeancard and Satie express the belief that most chemical works do not sufficiently emphasize the importance of determining the solubility of volatile oils in dilute alcohol. The U. S. P. is not exempt from this criticism.—Am. Druggist, 1910, v. 56, p. 40.

Hill and Umney submit processes for saponification and acetylization.—Pharm. J. 1910, v. 30, (84) p. 180. Also Chem. & Drug. 1910, v. 76, p. 271. For their reply to criticisms see Pharm. J. 1910, v. 31 (85), p. 437.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 18) call attention to the publication by Hill and Umney, and express the belief that the proposed tests should prove useful, not only for their intrinsic value, but also as a means of eliciting the opinions of other workers.

An editorial (Chem. & Drug. Lond., 1910, v. 76, p. 478) in discussing the prior publication of the proposed pharmacopœial monograph for essential oils, points out that this is the first time that this course has been attempted in connection with the Ph. Brit., and commends the move as being one in the right direction, despite the fact that it still remains to be proved how far the new method will meet the wants of the case. There can be no two opinions about the fact that it is a rational experiment devised for the good of all interested.

Jeancard and Satie point out that the total alcohol content is proportionate to the index of saponification after acetylization and discuss the method of estimating alcohols.—Am. Druggist, 1910, v. 56, p. 41.

Parry, Ernest J., contributes a paper on the refractive indices of essential oils, with tables of (1) constituents of essential oils, (2) essential oils, (3) adulterants and other bodies.—Chem. & Drug. 1910, v. 76, p. 178.

Harvey and Wilkie discuss the refractive index of essential oils, method of determination and results of a large number of determinations. They think the refractive index of essential oils is of doubtful value in a pharmacopœia.—Chem. & Drug. 1910, v. 76, p. 442.

Jeancard and Satie point out that for certain volatile oils the influence of temperature on the refractive index is not a negligible factor. They state that it is customary to observe the rotation at a temperature of 20°.—Am. Druggist, 1910, v. 56, p. 40.

E. Sachsse & Co. oppose the refractive index as a pharmacopœial standard, on the ground that dealers and consumers are not in possession of a refractometer and therefore not in a position to control that part of the tests.—Chem. & Drug. 1910, v. 76, p. 491.

Henderson, H. John, summarizes the evidence upon which he would suggest that the refractive indices find no place in the official monographs for the essential oils.—Pharm. J. 1910, v. 31 (85), p. 138.

Parry, Ernest J., contributes an article on the refractive indices of essential oils, embracing I. The refractive indices of numerous individual constituents of essential oils, with certain other bodies. II. The refractive indices of fractionated oils. III. The refractive indices of a large number of samples of numerous essential oils.—Chem. & Drug. 1910, v. 77, p. 314.

Jeancard and Satie discuss the methods of determining aldehydes in volatile oils.—Am. Druggist, 1910, v. 56, p. 42.

Nelson, E. K., discusses the quantitative determination of ketones in essential oils.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., pp. 186–187. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137).

Kleber, Clemens, agrees that the U. S. P. assay methods for essential oils are for the most part inaccurate.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 94.

Kremers, Edward, commenting on the criticisms that have been made of U. S. P. VIII methods of assay for volatile oils, states that at the time of revision there was a general clamor for chemical methods of assay and to meet the apparent demand some of the less objectionable methods were introduced.—Midl. Drug. 1910, v. 44, p. 3.

Sadtler, S. P., is reported as saying that the present methods for testing volatile oils were largely formulated by expert chemists from several oil firms, who were called in consultation. Several methods were introduced without sufficient verification.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 108.

Rohrman, Frank R., in discussing volatile oils, points out that the retail druggist is not qualified either by experience or equipment to analyze his oils. Hence he is compelled to rely on the probity of the jobber.—Proc. Pennsylvania Pharm. Ass. 1910, p. 385.

Hill, C. A., asserts that although our knowledge of essential oils has progressed sufficiently far to enable us to assay many of them for what are admittedly their most important constituents, we are not yet in a position to replace the natural oils by those constituents, whether natural or artificial products.—Pharm. J. 1910, v. 30, (84) p. 178. Also Chem. & Drug. 1910, v. 76, p. 271.

"Xrayser II," opines that, considering the difficulties surrounding the sophistication of essential oils, one is harassed by the doubt as to the possibility of ever constructing standards that will absolutely ensure genuineness of any essential oils.—Chem. & Drug. 1910, v. 76, p. 289.

Naumann, W., commenting on the paper by Hill and Umney, thinks the necessity of considering the tests and characters as of quite minor importance; he thinks they should be taken merely as suggestions, but not as the only criterion, as at present. The botanical origin and the odor of the oil should be the chief guide, and in regard to the tests and characters, the chemist should be free to make use of the most advanced knowledge available.—*Ibid.*, p. 341.

E. Sachsse & Co., apropos of the proposition to substitute the chief constituents of several essential oils for the oils themselves, state that as yet there is no irrefutable evidence from a medical or physiological point of view that in all possible cases the efficacy of the isolated constituents in question is better than that of the essential oil in its entirety.—*Ibid.*, p. 491.

Chace, E. M., in the referee report on flavoring extracts, discusses the determination of volatile oils and of alcohol in preparations of this class.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., pp. 64–76. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Baird, J. W., outlines a method for the estimation of volatile oils in alcoholic solutions.—Proc. Massachusetts Pharm. Ass. 1910, p. 89. also Apothecary, 1910, v. 22, No. 7, p. 18.

"H. M." describes and illustrates an apparatus for the estimation of volatile oils in spices.—Pharm. Zentralh. 1910, v. 51, p. 505.

Brown, J. A., describes and illustrates a method for the estimation of small quantities of essential oil in spices.—Analyst, London, 1910, v. 35, pp. 392–396.

LaWall, Charles H., describes a new method for preserving volatile oils and concludes that the addition of a small portion of fixed oil (5 or 10 per cent) to an easily decomposed volatile oil would be a satisfactory method of retarding deterioration.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1121–1122.

Eliel, Leo, has found alcohol to be a good preservative of oils of the citrus family.—*Ibid.*, p. 1122.

An editorial (Critic and Guide, 1910, v. 13, p. 176) expresses the belief that volatile oils are not used as much as they should be. The oils of cinnamon, cloves, cajuput, etc., have a hundred and one uses, and still we are almost neglecting them.

Martindale, W. Harrison (Perf. & Ess. Oil Rec., November 1910), discusses the antiseptic powers of essential oils. The abstract gives a tabulated statement of the carbolic coefficients.—Pharm. J. 1910, v. 31 (85), pp. 668, 670. See also Lancet, 1910, v. 179, p. 1778 and Brit. M. J. 1910, v. 2, p. 1935.

An editorial (Chem. & Drug. 1910, v. 77, p. 832), in discussing the use of essential oils as antiseptics, points out that essential oils or substances containing them are the oldest antiseptics that have been used by man, but that it is only within recent years that any systematic study of their antiseptic action has been made.

Gilmour, D. (Brit. Dent. J.; Pharm. J. 1910, 30, 644), reports on the dental uses of essential oils.—Year-Book of Pharmacy, 1910, p. 212.

OLEUM ÆTHEREUM.

Pearson and Sechler think that ethereal oil is of doubtful therapeutic value and for this reason alone the oil should be deleted. Its only medicinal use is in the preparation of compound spirit of ether, which is conceded to have an action identical therapeutically with that of spirit of ether which is itself not particularly valuable.—Merck's Rep. 1910, v. 19, p. 44.

OLEUM AMYGDALÆ AMARÆ.

Allen, E. Watlock, recommends that oil of bitter almond be made official in the Ph. Brit.—Pharm. J. 1910, v. 30, (84), p. 317.

E. Sachsse & Co. ask if oils of bitter almonds and cherry laurel, both with full contents of prussic acid, could not be made official.—Chem. & Drug. 1910, v. 76, p. 491.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 142), in commenting on the requirements proposed by the Second International Congress of the White Cross for oil of bitter almond, state that the maximum limit of value for the specific gravity of oil free from hydrocyanic acid is too high. They propose 1.055.

Pearson and Sechler believe the benzaldehyde assay of bitter oil of almonds is very unsatisfactory. They think that a product could be prepared from synthetic benzaldehyde and hydrocyanic acid which would answer in detail every one of the present U. S. P. specifications.—Merck's Rep., 1910, v. 19, p. 45.

Jeancard and Satie think that the sulphite method does not permit of an exact calculation of the benzaldehyde in oil of bitter almonds. They also point out that the solubility in 70 per cent alcohol is 1 to 1.5 and not 1.—Am. Druggist, 1910, v. 56, p. 42. Also Pharm. Era, 1910, v. 43, p. 143.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 17) call attention to the work by Auld and Feist in connection with the synthesis of d-benzaldehyde cyanohydrin.

They also (*Ibid.*, October 1910, p. 17) present a review of the controversy between Feist and Rosenthaler.

Eldred, Frank R., reports that eleven lots of bitter almond contained from 2 per cent to 3.8 per cent of hydrocyanic acid.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 894.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 7) report 3 samples of (natural) essential almond oil varying as follows: specific gravity 1.052 to 1.074; refractive index, 1.552; optically inactive. Hydrocyanic acid was present.

Chace, E. M., in referee report on flavoring extracts, discusses the determination of benzaldehyde, the detection of hydrocyanic acid and the determination of hydrocyanic acid in the absence of chlorides.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 74. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

OLEUM AMYGDALÆ EXPRESSUM.

Lucas and Bird assert that unless oil of almond is obtained from a reliable source it is almost impossible to guarantee its freedom from "kernel" oils, as the constants overlap. They present a modified monograph with tests.—Brit. & Col. Drug. 1910, v. 58, 315, 316. Also Pharm. J. 1910, v. 31 (85), pp. 470, 471.

Noyes, Reinold, notes that oils of bitter almond, peach kernels and apricot pits, when expressed are almost identical. He considers one as good as the other.—Proc. Minnesota Pharm. Ass. 1910, p. 73.

Dohme and Engelhardt state that the Ph. Hung. III directs that the acid number for the oil of sweet almond should be less than 3, and the iodine number 94 to 96; 0.7 gm. are taken for determining the latter.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1188.

Hill, Charles Alex., suggests that the superior value for the saponification number of oleum amygdalæ be reduced from 200 to 195, and the inferior value of the iodine number from 95 to 93.—Pharm. J. 1910, v. 31 (85), p. 780.

Riedel's Berichte (1910, p. xxviii) points out that the elaidin test is not always successful because of the absence of nitrous acid in the nitric acid, and suggests the addition of copper or of mercury.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 5) assert that their experience shows the refractive index of almond oil to be somewhat lower than recommended as a standard by Bird and Lucas; 1.4716 to 1.4722 being the range for some few samples of the genuine oil.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 7) report that a sample of fixed almond oil had a specific gravity of 0.924, refractive figure of +8° and an iodine value of 88.9. Neither sesame nor cotton seed oil was present, nor any of the usual adulterants.

Eldred, Frank R., reports that eight lots of expressed oil of almond were examined and found to vary in specific gravity at 15° from

0.917 to 0.919; index of refraction at 20° from 1.4703 to 1.4705; iodine value (Wijs) from 93.4 to 100.0; and saponification value from 188.5 to 193.0.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 894.

Walbum, L. E. (Statens Seruminst., Copenhagen; Pharm. Zentrh., 50, 845) reports observations on the stability of almond and olive oils at various temperatures and in various containers.—Chem. Abstr. 1910, v. 4, p. 641.

Beilstein, Christian, reports almond oil as being adulterated with sesame and poppy oils.—Proc. N. W. D. A. 1910, p. 99.

Sayre, L. E., reports on 2 samples of oil of sweet almonds: 1 passed; 1 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.

Idmann, Einar, (Farm. Notisblad, 1910, No. 1) outlines a method for the detection of adulterants in expressed oil of almond.—Apoth. Ztg. 1910, v. 25, p. 114.

OLEUM ANISI.

Wright, A., expresses the hope that the next pharmacopœia do not recognize the two varieties of anise oil.—Pharm. J. 1910, v. 30, p. 182.

Hill and Umney suggest for the oil distilled from the fruit either of *Pimpinella anisum* or *Illicium verum:* colorless or pale yellow, having the characteristic odor of anise and a sweet aromatic taste. Specific gravity at 20° (compared with water at 15.5°), 0.975 to 0.990 (rising on keeping); optical rotation 0 to −2°; refractive index, 1.552 to 1.558. It congeals when stirred at about 10°, and should not melt again at a temperature below 15°. At least 80 per cent should distil between 225° to 235°. Soluble in three volumes of 90 per cent alcohol.—Pharm. J. 1910, v. 30, (84) p. 178. Also Chem. & Drug. 1910, v. 76, p. 272.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 134), commenting on the proposed requirements of the Ph. Brit. V for anise oil and star anise oil, state that star anise oil is sometimes faintly dextrorotatory. They recommend that the congealing point be determined *lege artis*, and that +15° be required as the minimum; the oil should at the same time be cooled to 10° and should then be inoculated with a little solid anethol.

They also (*Ibid.* April 1910, p. 124), in reviewing the Ph. Hung. III requirements for Russian oil of anise, point out that it is advisable to take the specific gravity at 20° because anise oil sometimes solidifies of itself at 15°; the limits of value remain unaltered. It would have been better to specify that the solidifying point of this oil lies between 17 and 20°, and that when the oil is badly kept, or after frequent melting, it is considerably lowered. They also assert that oil of anise is soluble in from 1.5 to 3 volumes of 90 per cent alcohol.

They also (*Ibid.* April 1910, p. 128) comment on the Ph. Ital. III requirements for Russian anise oil.

Fuller, Stuart J., reports that there is a steady demand for aniseed oil, although it still shows a decline, caused, it is believed, to some extent by other preparations which have taken its place.—Cons. & Tr. Rep. Aug. 13, 1910, p. 486.

Noyes, Reinold, is not able to explain why star anise is less in price than true anise, both containing over 80 per cent of anethol. It may be due to speculation, also to the fact that while the oil from both seeds is official, the seed itself of pimpinella only is official. The yield from star anise is undoubtedly greater.—Proc. Minnesota Pharm. Ass. 1910, p. 72.

Schimmel & Co. (Semi-Annual Report, April, 1910, pp. 99–101) discuss the chemistry of oil of star anise and enumerate the substances found in this oil in addition to anethol, of which the oil of star anise contains about 90 per cent.

Hill and Umney, replying to criticisms, suggest for oleum anisi a rotation of −2° to +1°. The melting point as the really only reliable constant alone might be stated, but the suggested method of stating in their paper makes the position quite plain.—Pharm. J. 1910, v. 31 (85), p. 437.

Evans Sons Lescher & Webb state that in their experience a range of specific gravity from 0.978 to 0.990 has included all genuine anise oils.—Chem. & Drug. 1910, v. 76, p. 341.

Pearson and Sechler state that all of the samples of oil of anise which they have examined during the last 3 years have had specific gravities between 0.978 and 0.981 which would suggest that the limits given in the U. S. P. are too wide. They are also in favor of a method for the determination of anethol.—Merck's Rep., 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 141.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 140) report that in the case of star anise oil they have met with a specific gravity as low as 0.975 (20°).

Jensen, H. R., suggests a modified refractive index for aniseed oil, 1.5505 at 25°.—Pharm. J. 1910, v. 31 (85), p. 759.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 145), commenting on the requirements of the Second International Congress of the White Cross for star anise oil, state that occasionally star anise oils are faintly dextrorotatory. Star anise oil is soluble in from 1.5 to 3 volumes of 90 per cent alcohol.

Eldred, Frank R., reports that fifty-one lots of oil of anise (star) varied in optical rotation from +0.17° to −3.5°, and in the congealing point from 14.5° to 18°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 894.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 9) report 11 consignments of genuine aniseed oil with a specific gravity (20°)

of from 0.978 to 0.988; optical rotation +0.26° to −2°; refractive index 1.5505 to 1.556; solidifying point 13° to 16°; melting point 15.2° to 18°; soluble in from 1 to 3 volumes of 90 per cent alcohol. Figures obtained from pure oils this season suggest that the lower refractive index limit should be 1.550, rather than 1.552, which is proposed.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 18) report that 1 sample of oil of anise examined proved to have a slight dextrorotation +0.16°; it was perfectly normal in other respects.

An editorial (Chem. & Drug. 1910, v. 77, p. 516) discusses the anise oil dispute and the methods pursued by certain brokers.

Knapp, Arthur W., contributes a note on an old sample of oil of anise.—Pharm. J. 1910, v. 31 (85), pp. 795–797. See also pp. 144, 173 and Year-Book of Pharmacy, 1910, pp. 371–375.

Parry, Ernest J., reports the examination of oil of star anise, probably adulterated with some fraction of Chinese camphor oil.—Am. Perf. 1910–11, v. 5, pp. 196–197. Also Chem. & Drug. 1910, v. 77, p. 687.

Heine & Co. suggest keeping the distillate of *Pimpinella anisum*, the so-called "Russian" anise oil, separate from the star anise oil, distilled from *Illicium verum*, since the odor of the two oils is quite different. It would still be better to enter as official, instead of these oils, their chief and sole effective constituent, the anethol.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 19) point out that the increasing use of anethol in place of oil of anise will permit of ignoring the source of this substance and will obviate the frequent high price for true oil of anise, due to failure of the crop.

Goessmann, G., states that anethol has not proven itself to be pharmaceutically satisfactory. In making the anethol containing solution of ammonia the former frequently crystallizes out. This, he asserts, never occurs when the oil of anise is used.—Ber. pharm. Gesellsch., 1910, v. 20, p. 273.

The Massachusetts State Board of Health reports from 1.5 per cent to 6.3 per cent of oil of anise in spirit of anise, instead of 10 per cent by volume called for.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 746.

OLEUM AURANTII CORTICIS.

Kleber, Clemens, discusses the U. S. P. requirements and comments on the properties and chemical composition of oil of orange and oil of lemon.—Am. Perf. 1910–11, v. 5, pp. 93–94.

Jeancard and Satie point out that the residue of oil of orange at 100° is a determination of some value. It should amount to from 2 to 4 per cent in a good oil.—Pharm. Era, 1910, v. 43, p. 143. Also Am. Druggist, 1910, v. 56, p. 42.

Pearson and Sechler think that the data on authentic oil of orange, compiled by the Department of Agriculture, could be used as a basis of adjusting standards for this oil.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 141.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 58) report that the quantity of oil of sweet orange produced during the past year is comparatively small.

They also (*Ibid.* October 1910, p. 45) discuss the economic conditions of the market relating to oil of orange and the proposed monopolization of the production of Sicily.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 77, May 2, p. 7) discusses the recent customs regulations concerning oil of orange. See also *Ibid.* January 10, p. 7 and Chem. & Drug. 1910, v. 77, p. 381.

Hill and Umney suggest for the oil obtained by expression from the rind of the bitter orange *Citrus aurantium* var. *bigardia* (and the sweet orange *C. aurantium*): an orange yellow liquid having the characteristic odor of oranges and an aromatic bitter taste. Specific gravity at 15.5°, 0.847 to 0.853; optical rotation at 20°, +92° to +98°; refractive index at 20°, 1.472 to 1.478. Rapidly deteriorates on exposure to light and air.—Pharm. J. 1910, v. 30, (84) p. 180. Also Chem. & Drug. 1910, v. 76, p. 273.

Evans, J. H., points out that the combined monograph for oil of orange peel does not entirely cover the variations of the bitter and sweet oils.—Chem. & Drug. 1910, v. 76, p. 341.

Heine & Co. point out that if the sweet and the bitter oil of orange are both to be considered as official, it seems necessary to extend the physical characters far enough to suit both oils. Thus the specific gravity must be indicated as between 0.848 and 0.857, and the optical rotation is to be extended from +90° to +98°.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 22) report that samples of bitter and sweet orange oil were tested, both being accepted as genuine. The specific gravity of the bitter was 0.85451; of the sweet, 0.851. The optical rotation of the bitter was +90.25°; of the sweet, 98.32°.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 138), in commenting on the proposed Ph. Brit. V requirements for oil of orange, state that the proposed specific gravity limits directly exclude oil of bitter orange, notwithstanding that Hill and Umney desire to admit both the bitter and sweet oils into the pharmacopœia. The requirements, correctly stated, should be at 15°, 0.848 to 0.857. The lower limit for optical rotation should be +90°.

Hill and Umney, replying to criticisms, suggest that for oleum aurantii, a range of specific gravity from 0.847 to 0.854 and rotation +92° to +99° would seem to be unobjectionable in view of slight variation from season to season.—Pharm. J. 1910, v. 31 (85), p. 437.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 54) report that the bitter and sweet orange oils examined had specific gravity 0.847 to 0.854; optical rotation +92° to +99°. The bitter oil was the more soluble in 90 per cent alcohol. One suspicious sweet oil had a specific gravity of 0.8539; optical rotation +96.45°; refractive index 1.473 (22°). It, however, did not contain turpentine.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 144), commenting on the requirements proposed by the Second International Congress of the White Cross for oil of sweet orange, state that they have never found the specific gravity to fall below 0.848.

Beilstein, Christian, reports orange oil as being a fraudulent imitation of the natural article.—Proc. N. W. D. A. 1910, p. 100.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 68) report the specific gravity, optical rotation and solubility in alcohol of 5 samples of oil of orange obtained by distillation in the West Indies.

Chace, E. M., in the referee report on flavoring extracts, outlines methods for the determination of citral, the determination of total aldehydes and the detection of pinene.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., pp. 72–73. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

OLEUM BERGAMOTTÆ.

The Chem. & Drug. (1910, v. 77, p. 626) calls attention to some illustrations of old apparatus used in the production of oil of bergamot.

Heinrich Haensel (Bericht, October–March 1909–10, pp. 12–14) discusses the economic condition of the oil of bergamot market.

Schimmel & Co. (Semi-Annual Report, October 1910, pp. 56–64) discuss the economic conditions of the market relating to oil of bergamot, and point out that it appears that, in Italy, inferior oils of bergamot are now brought up to the required ester content by carefully "adjusting" them with tri-ethyl citrate in such a manner that the addition does not throw the physical constants outside the limit of the values which apply to pure oil of bergamot.

Wiegand and Rübke (Ztschr. ang. Chem. 1910, p. 1018) report observations on the adulteration of oil of bergamot by means of the ester of citric acid.—Apoth. Ztg. 1910, v. 25, p. 435.

Roure-Bertrand Fils (Sc. & Ind. Bull. October 1910, p. 54) report that there will barely remain at Reggio some 15,000 kilos of oil of bergamot, which will certainly be sold before the arrival of the next crop.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 142), in commenting on the requirements proposed by the Second International Congress of the White Cross for bergamot oil, state that the color varies from honey-like to green. In a supplement the statement is made that pure oils, especially at the beginning of the season, sometimes contain less than 30 per cent of ester. It is also recommended to test for the addition of artificial esters.

An unsigned article (Am. Perf. 1910–11, v. 5, p. 30) presents the constants for pure oil of bergamot, adulterated bergamot oils and synthetic bergamot oil.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 59) report on 2 samples of oil of bergamot which were found to be adulterated with terpinyl acetate. They give a table showing the behavior of this oil, also a table showing the behavior on boiling.

Umney, John C. (Chem. Druggist, 75, 411) points out that terpineol acetate, which, it is alleged, is being manufactured as an adulterant of essential oils, was found present in bergamot oils purporting to be genuine.—Chem. Abstr. 1910, v. 4, p. 1219.

Heinrich Haensel (Bericht, April–September 1910, p. 9) reports that the ester content of the new crop of oil of bergamot is approximately 38 per cent. In the previous year when, because of the earthquakes, the crop was harvested late, the ester content varied from 41–42 per cent.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 15) report on 7 lots of bergamot oil: specific gravity, 0.8826 to 0.8850; optical rotation +17.24° to +22.40°, refractive index 1.4637 to 0.4639; linalyl acetate, 37 to 40 per cent. Ethyl citrate was not present in any sample.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 18) report that 2 samples of bergamot oil gave normal results, but were not wholly soluble in 2 volumes of alcohol (80 per cent); the figures obtained were: specific gravity, 0.881 and 0.883; esters as linalyl acetate, 35.37 and 36.90 per cent; residue on evaporation 4.09 and 5.81 per cent.

OLEUM BETULÆ.

Hill and Umney suggest for the oil obtained by distillation from the bark of *Betula lenta:* (Being practically identical with oleum gaultheriæ [q. v.] one monograph will suffice). A colorless liquid having a strong characteristic odor and a pungent taste. Specific gravity at 15.5°, 1.180 to 1.187; optically inactive, or from 0° to −1° at 20°; refractive index at 25°, 1.537 to 1.539. Soluble in 5 volumes of 70 per cent alcohol at 25°. Should contain at least 99 per cent of methyl salicylate as determined by the saponification process.—Pharm. J. 1910, v. 30, (84) p. 180. Also Chem. & Drug. 1910, v. 76, p. 273.

Harvey and Wilkie think a specific gravity of 1.180 to 1.187 somewhat low.—Chem. & Drug. 1910, v. 76, p. 421.

E. Sachsse & Co. propose the introduction of artificial oil of wintergreen in place of the natural oil.—Brit. & Col. Drug. 1910, v. 57, p. 241. Also Chem. & Drug. 1910, v. 76, p. 491.

Beilstein, Christian, asserts that birch oil continues to be adulterated to a considerable extent with synthetic methyl salicylate.—Proc. N. W. D. A. 1910, p. 98.

Pearson and Sechler think that oil of birch is difficult to distinguish from methyl salicylate, especially in mixtures containing less than 20 per cent of the latter. The odoi dilution test, Cone's test, and color reactions with nitrous acid and aldehydes are of value.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 141.

Davis, James E., reports that oil of betula is worth 3 times what methyl salicylate is, and oil of gaultheria is worth over double the price of oil of betula, and yet, all 3 of these articles test practically alike, except that oil of gaultheria always shows a slight rotation to the left (of 1° or less).—Pioc. Michigan Pharm. Ass. 1910, p. 63.

OLEUM CADINUM.

Pearson and Sechler think that oil of cade is certain to be of variable composition, depending upon the degree of heat and the apparatus used. They suggest that tests to detect common adulterants might be inserted in the U. S. P.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 141.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 17) tested 6 samples of oil of cade, having specific gravities of from 1.005 to 1.0425, and being soluble in 0.5 volume of 90 per cent alcohol.

OLEUM CAJUPUTI.

The Daily Consular and Trade Reports (October 5, 1910, p. 60) notes that during the three months ended June 30, 1910, 17,024 pounds of cajuput oil were declared for export to the United States from Netherlands India, via Batavia.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 23) present a table showing the gradual reduction in the exports of oil of cajuput from Macassar during the years 1905 to 1909. They also quote R. C. Cowley (Pharm. J. 1910, v. 31, 85, p. 69) who asserts that in Queensland 7 varieties of *Melaleuca leucadendron* L. occur.

Jeancard and Satie think it is the content of cineol which should determine the value of oil of cajuput and point out that the phosphoric method is inexact.—Am. Druggist, 1910, v. 56, p. 42.

Pearson and Sechler assert that the U. S. P. method for assaying cineol gives results far below the true amount present. They think the resorcinol method is to be preferred.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 141.

Rippetoe, John R., asserts that the assay process for determination of cineol in oil of cajuput is very unsatisfactory. He has found the resorcin method satisfactory, and thinks it would be a more desirable method than the present one.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1062.

An unsigned note (Chem. & Drug. 1910, v. 77, p. 687) calls attention to the wide latitude allowed by the Ph. Russ. VI in the specific gravity of oleum cajuputi, 0.915 to 0.930.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 128), in reviewing the Ph. Ital. III requirements for cajuput oil, point out that 0.919 is more correct as the minimum specific gravity limit.

Hill and Umney suggest: The oil distilled from *Melaleuca leucadendron* and other species. A green or bluish-green liquid, with an agreeable camphoraceous odor, and an aromatic bitter camphoraceous taste. Specific gravity, at 15.5°, 0.919 to 0.930; optical rotation at 20° not more than $-2°$; refractive index at 25°, 1.460 to 1.467. When 10 cc. of the oil are mixed in a freezing mixture, with 4 to 5 cc. of phosphoric acid specific gravity 1.750, and pressed in a piece of fine calico between folds of blotting paper, under a strong press, and the compressed cake decomposed by water in a 25 cc. measure, it should yield at least 4.5 cc. of cineol.—Pharm. J. 1910, v. 30 (84), p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

E Sachsse & Co. consider the requirements and methods of the Ph. Brit. IV better than those proposed, as it is unlikely that the method of determining the cineol content can be carried out by ordinary small laboratories. Should the cineol test nevertheless be made a standard they consider the U. S. P. method better than that of Hill and Umney, as the latter can only in rare instances give exact results.—Chem. & Drug. 1910, v. 76, p. 491.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 134), in commenting on the proposed requirements of the Ph. Brit. V for cajuput oil, state that they have met with genuine samples with rotations up to $-3.40°$. They cannot understand how Hill and Umney can recommend so unreliable a method as the determination of cineol by means of phosphoric acid for incorporation into the Pharmacopœia.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 17) report that 7 samples out of 9 tested came within the standards of purity: specific gravity, 0.918 to 0.922; rotation, $-1°$ to $-2.50°$; cineol, 45 to 61 per cent. Two samples had to be rejected as adulterated. They found the resorcin method absolutely useless for estimating cineol in cajuput oil, the indicated results being much in excess of the real. See also Chem. & Drug. 1910, v. 76, p. 341.

Parry, E. J., prefers the American method of testing cajuput and eucalyptus oils, the method involving the dilution of the oil with petroleum ether before the addition of phosphoric acid.—Pharm. J. 1910, v. 30 (84), p. 181.

Harvey and Wilkie state that in perfectly genuine samples a rotation of $-2°$ is often exceeded. Of 21 samples, 6 showed rotations ranging from −2.26° to −2.84°.—Chem. & Drug. 1910 v. 76, p. 421.

Cowley, R. C., gives as the characters of a cajuput oil distilled from *Melaleuca leucadendron* var. *lancifolia* by T. Ingham of Brisbane: Specific gravity, 0.922; optical rotation (100 mm.) −3°; refractive index, 1.4623; cineol, 45 per cent.—Chem. & Drug. 1910, v. 76, p. 832.

Evans Sons Lescher & Webb have had genuine oils with a specific gravity of 0.918 and a high cineol content. They think this should be the minimum figure, rather than 0.919, as suggested. On the other hand, 0.930 seems unnecessarily high. In their experience, 0.925 would include all normal oils.—*Ibid.* p. 341.

Hill and Umney, replying to criticisms, suggest that the rotation for oleum cajuputi might be extended to −4°.—Pharm. J. 1910, v. 31 (85), p. 437.

Gilmour, D. (Brit. Dent. J.) thinks oil of cajuput an excellent root canal dressing previous to filling with gutta-percha.—*Ibid.* v. 30 (84), p. 644.

OLEUM CARI.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 31) present a table published by the Dutch ministry of Agriculture showing the area under cultivation and the yield of caraway in the different sections of Holland during the years 1907 to 1909.

Heinrich Haensel (Bericht, April–September 1910, pp. 29–31) reports that the oil content of the new seed is abnormally low, varying from 3.5 to 4.3 per cent.

Jeancard and Satie think it is to be regretted that no mention has been made of the content of carvone in oil of caraway.—Am. Druggist, 1910, v. 56, p. 42. Also Pharm. Era, 1910, v. 43, p. 143.

Pearson and Sechler state that 9 samples of oil of caraway examined by them had specific gravities between 0.906 and 0.910 and they suggest that the U. S. P. limit could be made closer without inflicting any hardship.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 141.

Eldred, Frank R., reports that nineteen lots of oil of caraway varied in specific gravity at 15° from 0.904 to 0.912; and optical rotation from +76.1° to +80.3°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 894.

Noyes, Reinold, states that, on account of the large quantity of pure carvone consumed in liquor manufacture, the distillers have fallen before the temptation of selling the decarvolized oil, and it is frequently found that their offerings contain none of the valuable portion of oil of caraway whatever.—Proc. Minnesota Pharm. Ass. 1910, p. 76.

Hill and Umney suggest: The oil distilled from caraway fruit and rectified. Colorless or pale yellow, with the characteristic odor of the fruit and spicy taste. Specific gravity at 15.5°, 0.910 to 0.920; optical rotation at 20°, +75° to +82°; refractive index at 25°, 1.485 to 1.497. It should be soluble in an equal volume of 90 per cent alcohol and in 10 volumes of 80 per cent. When fractionally distilled from a Wurtz flask at the rate of one drop per second at least 50 per cent should distill above 200°.—Pharm. J. 1910, v. 30 (84), p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

Henderson, H. John, thinks that the introduction of a test involving fractional distillation is superfluous.—Year-Book of Pharmacy, 1910, p. 386.

Simmons, Wm. H., suggests that since carvone may be readily estimated by extraction with neutral sodium sulphite solution, this determination might well replace the distillation process.—Chem. & Drug. 1910, v. 76, p. 304.

E. Sachsse & Co. consider that as all pharmacopœias which mention caraway oil do not require a higher specific gravity than 0.905 to 0.915, these standards are sufficient. The distilling process seems unnecessary to them, as all the other tests suffice to prove the good quality of the oil.—*Ibid.* p. 491. See also Brit. & Col. Drug. 1910, v. 57, p. 241.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 134), in commenting on the proposed requirements of the Ph. Brit. V for oil of caraway, point out that 0.908 would be a more appropriate limit for minimum specific gravity; the minimum optical rotation limit is too low; it should be +70°.

Hill and Umney, replying to criticisms, state that there is no reason to lower the specific gravity of oil of caraway. A minimum rotation of +75° accords with maximum specific gravity 0.920. The physical limits are practically sufficient in themselves to ensure desirable carvone percentage.—Pharm. J. 1910, v. 31 (85), p. 437.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 19) report on 4 samples of oil of caraway: specific gravity, 0.9088 to 0.912; optical rotation, +77.30° to +78.40°; carvone, up to 52 per cent. In estimating the carvone accurate results are obtained if, when using the neutral sulphite method, a supersaturated solution is employed, otherwise complete addition of the carvone is practically impossible.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 19) report the figures obtained by the analysis of a sample of English and two of foreign distilled oil of caraway: specific gravity, English oil, 0.908; foreign oils, 0.9165 and 0.916; optical rotation, English oil, +80.73°; foreign oils, +75.75° and +76.75°; distillate above 200°, English oil, 46 per cent; foreign oils, 54 and 48 per cent. They note that Hill and Umney propose 0.910 as the lower limit of specific gravity, a figure which in their experience is decidedly too low.

OLEUM CARYOPHYLLI.

Jeancard and Satie assert that the limits of specific gravity of the U. S. P. VIII for oil of cloves are those at a temperature of 15° and not 25°.—Pharm. Era, 1910, v. 43, p. 143. Also Am. Druggist, 1910, v. 56, p. 42.

An unsigned article (Chem. & Drug. 1910, v. 77, p. 687) calls attention to the wide latitude allowed by the Ph. Russ. VI in the specific gravity of oleum caryophylli, 1.045 to 1.070.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 125), in a review of the Ph. Hung. III, point out that freshly distilled oil of cloves gives a clearly perceptible, although very faint, acid reaction. The clouding of this oil, when dissolved in equal volumes of carbon disulphide, benzine and chloroform, is due to the water which occurs in the oil as a result of the process of manufacture.

Jeancard and Satie state that oil of cloves is soluble in 1 to 1.5 parts of 70 per cent alcohol, 1.5 to 2 parts of 65 per cent alcohol, and 2 to 5 parts of 60 per cent alcohol.—Am. Druggist, 1910, v. 56, p. 41.

Masson, H. (Compt. rend. 149, (1909), 630, 785) describes a series of newly discovered constituents of clove oil, the chemistry of which is given in the abstract.—Semi-Annual Report, Schimmel & Co., April 1910, p. 44.

Hill and Umney suggest for the oil distilled from cloves: Colorless or pale yellow when recent, darkening with age, and on exposure to air, and having the strong odor and taste of cloves. Specific gravity at 15.5°, 1.047 to 1.070; refractive index at 25°, 1.528 to 1.540; soluble in 3 volumes of 70 per cent alcohol. An alcoholic solution yields a blue color with test solution of ferric chloride. If 10 cc. of the oil be heated and well shaken with 100 cc. of a 5 per cent aqueous solution of potassium hydroxide on a water bath in a flask with neck graduated in tenths of 1 cc., and then allowed to stand, the uncombined oil driven into the neck should measure not more than 2 cc., showing the presence of at least 80 per cent of eugenol.—Pharm. J. 1910, v. 30 (84), p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

Allen, E. Watlock, suggests: Specific gravity, 1.047 to 1.060; eugenol, by KOH test, 84 to 88 per cent.—Pharm. J. 1910, v. 30 (84), p. 317.

Simmons, Wm. H., suggests that a minimum of 80 per cent of eugenol is far too low. A more reasonable figure would be 85 per cent.—Chem. & Drug. 1910, v. 76, p. 304.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 135), in commenting on the proposed Ph. Brit. requirements for oil of cloves, state that Hill and Umney carry out the test for eugenol content with a 5 per cent solution of potassium hydroxide. They think it is preferable to use a 3 per cent solution.

Evans Sons Lescher & Webb think a specific gravity of 1.070 unnecessarily high, they would suggest a range of from 1.047 to 1.055. They have never found an oil of their own distillation with a lower phenol content than 84 per cent, the average works out at over 85 per cent.—Chem. & Drug. 1910, v. 76, p. 341.

Stafford Allen & Sons, Ltd., state that a specific gravity of 1.047 admits some oils of excellent aroma, chiefly from Amboyna cloves, and therefore acceptable, but products having a specific gravity of 1.070 are simple crude eugenol, and do not represent the true fragrance of good cloves.—*Ibid.* p. 372.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 139), commenting on the suggestion that clove oil have a minimum content of 85 per cent of eugenol, state that the results obtained by them do not bear out the justice of this suggestion, for they show that the eugenol content of cloves very frequently falls below 85 per cent. They would not regard it as proper to increase the percentage from 80 to 85 per cent.

Hill and Umney, replying to criticisms, state that the lower gravity oils are the more aromatic. A minimum of 85 per cent of eugenol is recommended.—Pharm. J. 1910, v. 31 (85), p. 437.

Dodge, Francis D., in discussing the analysis of essential oils, asserts that eugenol is not an improvement on oil of cloves, and that the purer this constituent is obtained the less valuable in a way does it appear to be.—Am. Perf. 1910–11, v. 5, p. 99.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 43) call attention to the cunning adulteration of oil of cloves. A sample under observation was considered suspicious because of the high optical rotation and further examination demonstrated that it contained an abundant quantity of safrol and some creosote products which of course do not occur in natural oil of cloves.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 20) report that for 8 samples of oil of cloves tested specific gravities ranged from 1.047 to 1.056, and in no case did the proportion of eugenol present fall below 85 per cent.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 24) report that clove oil of their own distilling varies very slightly. The specific gravity varied from 1.047 to 1.049, with an eugenol content of 85 to 88 per cent, estimated by absorption with 3 per cent potassium hydroxide.

A news note reports the death of a child, age 18 months, who died as the result of drinking oil of cloves.—Brit. & Col. Drug. 1910, v. 58, p. 227.

Ulsaver, E. S., reports on the use of a mixture of oil of cloves and zinc oxide as a temporary filling for sensitive cavities and for children's teeth where the pulps are exposed.—Dental Digest, 1910, v. 16, p. 631.

Gilmour, D. (Brit. Dent. J.) thinks oil of cloves one of the best agents for the treatment of pulpless teeth. It is both antiseptic and anæsthetic.—Pharm. J. 1910, v. 30 (84), p. 644.

OLEUM CHENOPODII.

Rabak, Frank, states that American wormseed is grown chiefly in Maryland and Southward, where the plant is found growing wild.—Bull. No. 195, Bur. Plant. Ind., U. S. Dept. Agric., 1910, p. 35.

LaWall and Bradshaw report finding 7.0 per cent ash in American wormseed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Pearson and Sechler think that some definite standard should be given for oil of chenopodium.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 141.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 78) report that European wormseed oils from *Artemisia maritima* (*Sem. santonica*) varied in specific gravity from 0.9255 to 0.945; optical rotation, −3° to −3.20°; soluble in 2 volumes 70 per cent alcohol. One of the oils had a refractive index (22°) of 1.4688. American (Baltimore) wormseed oils from *Chenopodium anthelminticum* varied in different limits: specific gravity, 0.9667 to 0.9854; optical rotation, −4.10° to −6.0°. One of the oils had a refractive index of 1.4755 (at 20°).

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 26) report that the only parcel of American wormseed oil examined by them proved to give satisfactory results: specific gravity, 0.973; optical rotation, −6.85°.

Salant, William, presents a communication on the pharmacology of oil of chenopodium.—J. Pharmacol. & Exper. Therap., 1910–11, v. 2, p. 391.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 142) assert that oil of American wormseed is constantly acquiring more importance in Europe as a remedy for ascaridæ; they also assert that the oil is produced mainly in Maryland. They present liberal abstracts from an article illustrating the method of administration of this oil.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 259–260) reviews a paper by Gockel (Münch. med. Woch., 1910, No. 31) on the use of oil of chenopodium in ascaridiasis.

OLEUM CINNAMOMI.

Rusby, H. H., states that he has met with cassia bark into each mat of which has been thrown a large handful of sand from a tub at the packer's side.—Practical Druggist, 1910, v. 27, p. 424.

Fuller, Stuart J., reports that cassia oil still goes regularly into consumption in the 75 to 80 per cent cinnamic aldehyde and 80 to

85 per cent cinnamic aldehyde grades, oil of 70 to 75 per cent being now excluded by the United States. The Bureau of Manufactures adds that the imports of cassia and cinnamon oil into the United States in the fiscal year 1909 totaled 133,194 pounds.—Cons. & Tr. Rep. Aug. 13, 1910, p. 486.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 30) call attention to a recent report published by the U. S. Bureau of Manufactures in regard to cassia oil.

Davis, James E., reports that practically all of the oil of cassia sent out of China is adulterated. It must be redistilled or rectified before it can be sold as U. S. P.—Proc. Michigan Pharm. Ass. 1910, p. 64.

Rippetoe, John R., thinks that the oil of cinnamon and oil of cassia should be considered as two distinct oils.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1062.

Noyes, Reinold, states that the oil of Ceylon cinnamon and oil of China cassia bear the same relation to each other as do the barks, the former having the finer aroma and taste.—Proc. Minnesota Pharm. Ass. 1910, p. 72.

Pearson and Sechler report that it is quite difficult to get commercial samples of oil of cinnamon that fail to give the test for presence of lead and copper. These impurities can not easily be eliminated without redistillation. They have seen one sample giving the U. S. P. test for petroleum or rosin.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 141.

Dohme and Engelhardt state that in the Ph. Hung. III the oil distilled from the leaves of *Cinnamomum cassiæ* are official. The specific gravity is given at 1.055 to 1.065.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1188.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 125), in a review of the Ph. Hung. III requirements for cassia oil, point out that this oil is always faintly acid and that the higher limits of value and specific gravity should be 1.070.

They also (*Ibid.* April 1910, p. 129), in reviewing the Ph. Ital. III requirements for oil of cinnamon, point out that cassia oil is from the first deep yellow to brown; neither of the oils is colorless. Cassia oil does not form a quite clear solution in 1 volume in 3 of 70 per cent alcohol. The requirement that the cinnamic aldehyde content be not less than 70 per cent is not correct for either oil. In the case of Ceylon cinnamon oil the aldehyde content ranges from 65 to 76 per cent; while cassia oil should have at the very least 75 per cent.

Jeancard and Satie state that oil of cassia is soluble in 2 parts of 70 per cent alcohol, 3 to 5 parts of 65 per cent alcohol, and 10 to 20 parts of 60 per cent alcohol.—Am. Druggist, 1910, v. 56, p. 41.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 142), in commenting on the requirements proposed by the Second International

Congress of the White Cross, state that the rotation ranges from −1° to +6°. They think the minimum aldehyde content should be 75 per cent.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 20) report that one rather unusual sample of cassia oil was tested, apparently genuine, with specific gravity 1.0636; optical rotation, +2.50°; cinnamic aldehyde, 80 per cent; soluble in 2 volumes 70 per cent alcohol.

Southall Bros. & Barclay (Rep. 1910, Birmingham 1911, p. 19) report that the only sample of oil of cassia examined gave a specific gravity of 1.0645; cinnamic aldehyde, 78 per cent.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 33) point out that the exact estimation of cinnamic aldehyde in oil of cassia by the bisulphite method is sometimes rendered difficult by the appearance at the plane dividing the layers of oil and water of a granular separation which may prevent an accurate reading of the oil layer, and quote C. F. Yates (Perfum. and Essent. Oil Record, 1 (1910), 171) who proposes that the determination be made gravimetrically instead of volumetrically.

Gilmour, D. (Brit. Dent. J.) thinks oil of cassia the most potent of the essential oils as a germicide, and points out the advantages and disadvantages of its use in dental surgery. Oil of cinnamon he finds to have similar properties but in lesser degree.—Pharm. J. 1910, v. 30 (84), p. 644.

Martindale, W. H., reports that cinnamon leaf oil appears to have a higher antiseptic value than the bark oil, and further, cinnamon bark oil containing 52 per cent aldehyde takes a higher place than the 82 per cent quality; but cinnamic aldehyde itself has a still lower antiseptic value, indicating that the total antiseptic value (30) of cinnamon oils is not entirely attributable to the aldehyde.—*Ibid.* v. 31 (85), pp. 632–633.

OLEUM CINNAMOMI ZEYLANICUM.

Hill and Umney suggest for the oil distilled from cinnamon bark: Yellow when freshly distilled, gradually becoming reddish, having the characteristic odor of the bark, and a warm sweet taste. Soluble in 3 to 4 volumes of 70 per cent alcohol. Refractive index at 25°, 1.572 to 1.582; specific gravity at 15.5°, 1.025 to 1.040; optical rotation at 20° from −0.5° to −1°. One drop dissolved in 90 per cent alcohol and a drop of ferric chloride test solution added should afford a pale green, but not a blue or brown coloration. (Absence of cinnamon leaf oil and cassia oil). It should contain 55 to 75 per cent cinnamic aldehyde as determined by the test outlined.—Pharm. J. 1910, v. 30 (84), p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

Parry, E. J., asks why the bisulphite had been excluded in favor of the neutral sulphite. He did not see why this oil should contain 75 per cent of cinnamic aldehyde.—Pharm. J. 1910, v. 30 (84), p. 181.

Brewis, Theo., thinks the lower limit for cinnamic aldehyde should be 50 per cent, otherwise some of the most fragrant oils would be excluded; the specific gravity limits suggested would also exclude some oils of the fine odor value.—*Ibid.* p. 182.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 135), in commenting on the proposed Ph. Brit. V requirements for cinnamon oil, Ceylon, state that the minimum limit of specific gravity is too high; it should be 1.023. They have found the aldehyde content of normal oils distilled by themselves from Ceylon cinnamon to vary from 65 to 76 per cent. Oils with an aldehyde content of from 55 to 65 per cent are, to say the least suspicious.

E. Sachsse & Co. report finding samples of oil of cinnamon of their own distilling soluble in equal parts of 80 per cent alcohol which are not soluble in 3 to 4 volumes of 70 per cent alcohol, and express the belief that such a test would exclude a number of the fine and pure cinnamon oils. They also suggest lowering the bottom limit of cinnamic aldehyde content to 50 per cent.—Brit. & Col. Drug. 1910, v. 57, p. 241. Also Chem. & Drug. 1910, v. 76, p. 491.

Evans Sons Lescher & Webb suggest that 50 to 70 per cent of cinnamic aldehyde and a specific gravity of 1.020 to 1.035 would more nearly approximate the figures to be obtained from genuine oils than those suggested.—Chem. & Drug. 1910, v. 76, p. 341.

Heine & Co. suggest that the proposed Ph. Brit. minimum limit of specific gravity, (1.025) be somewhat lowered.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 140) report that they have found oils distilled by themselves to have a specific gravity at 15° of 1.023 to 1.040.

Stafford Allen & Sons, Ltd., find themselves at variance with all the authorities as to specific gravity and aldehyde content. In the distillation of Ceylon cinnamon (quills and chips) two oils are obtained the one lighter and the other heavier than water; these they mix to produce a ''normal and natural distillate,'' the specific gravity of which never reaches the suggested limits of 1.025 to 1.040. For the past few years their results from fine Ceylon cinnamon, broken quills and chips, varied between 1.003 and 1.018.—Chem. & Drug. 1910, v. 76, p. 372.

Allen, E. Watlock, reports the specific gravity of this oil as distilled by them much below the usually accepted limits, which appear to have been based upon imported oils. The figures for cinnamic aldehyde also are higher than they obtain with true Ceylon cinnamon.—Pharm. J. 1910, v. 30 (84), p. 317.

Schimmel & Co. (Semi-Annual Report, October 1910, pp. 34–36) comment on articles by Hill and Umney and Bennett regarding the cinnamic aldehyde content of oil of Ceylon cinnamon, and express the belief that the low aldehyde content observed by the English chemists affords fresh evidence of the fact that the art of properly distilling cinnamon barks is not yet quite understood in Ceylon, nor, in certain quarters at any rate, in England.

Simmons, Wm. H., suggests that a maximum limit for phenols, as determined by absorption with 5 per cent caustic potash solution, might be given.—Chem. & Drug. 1910, v. 76, p. 304.

Hill and Umney, replying to criticisms, suggest for oleum cinnamomi the following characters: specific gravity, 1.000 to 1.030; aldehyde content, 55 to 65 per cent, and certainly refractive index limits from 1.565 to 1.580.—Pharm. J. 1910, v. 31 (85), p. 437.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 143), in commenting on the requirements proposed by the Second International Congress of the White Cross, state that the minimum specific gravity limit should be 1.023. The cinnamic aldehyde content of Ceylon cinnamon oil is 65 to 76 per cent. A higher content would point to the addition of cassia oil or of cinnamic aldehyde. Ceylon cinnamon oil is soluble in 2 to 3 volumes of 70 per cent alcohol.

Umney and Bennett contribute a note on cinnamon bark oil, with tabulated statements of results obtained by their analyses.—Pharm. J. 1910, v. 31 (85), p. 145. For discussion see p. 173, and Year-Book of Pharmacy, 1910, pp. 376–382.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 22) report that prominent English and German distillers have recently been in dispute as to the real aldehyde standard for normal oils. It is, however, quite agreed that the value of the flavor depends chiefly on the non-aldehyde constituents, and these obviously are in highest proportion in English (and Ceylon) distilled oils, since cinnamic aldehyde is removed as cinnamic acid.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 19) report that considerable difference of opinion appears to exist as to the limits for cinnamic aldehyde which may be properly imposed upon oil of cinnamon, foreign distillers considering the low percentages of the aldehyde obtained by some English makers to be a result of imperfect methods of distillation.

Hill, Charles Alexander, comments on the nature of oil of Ceylon cinnamon, and presents a table showing analytical data for 6 samples taken from bulk; the refractive index, excepting 1 old sample, varied only from 1.527° to 1.5767°. He also presents a second table which gives similar data for 14 samples of cinnamon oil, varying in quality and price. The refractive index varied from 1.5844° to 1.589°.—Am. Perf. 1910–11, v. 5, p. 117. See also Chem. & Drug. 1910, v. 76, p. 959.

Roure-Bertrand Fils (Sc. & Ind. Bull. April 1910, pp. 34–37) report some additional work on the hydrochloric acid ester of cinnamic alcohol.

OLEUM COPAIBÆ.

Hill and Umney suggest for the oil distilled from copaiba: Colorless or pale yellow, having the characteristic odor of copaiba and a pungent bitter taste. Specific gravity at 15.5°, 0.900 to 0.910; optical rotation at 20°, −7° to −35°; refractive index at 25°, 1.494° to 1.500°; distils between 250° to 275°. One cc. of the oil dissolved in 5 cc. of glacial acetic acid, and 4 drops of nitric acid added, should not develop more than a faint violet coloration. (Absence of gurjun oil.)—Pharm. J. 1910, v. 30 (84), p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

Parry, E. J., thinks the optical rotation given by Hill and Umney satisfies neither an absolute nor a restrictive standard.—Pharm. J. 1910, v. 30 (84), p. 181.

Evans Sons Lescher & Webb state that a limit of optical rotation from −10° to −35° and specific gravity 0.898 to 0.910 would include oils obtained from normal samples of balsams of various varieties, which at present at any rate are of commercial interest.—Chem. & Drug., 1910, v. 76, p. 341.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 135), in commenting on the proposed Ph. Brit. requirements for copaiba balsam oil, state that they have found the specific gravity of good oils to run as high as 0.925. The rotation is frequently rather lower than −7°. They regard the color test with nitric acid as affording no proof for the detection of gurjun oil.

Smith, J. Beddall, reports 3 samples, genuine in every other respect, which gave the following specific gravities: 0.8966, 0.8970, 0.8966.—Pharm. J. 1910, v. 30 (84), p. 226.

Harvey and Wilkie state that the suggested specific gravity, 0.900 to 0.910, excludes many genuine oils; the lower limit should be 0.896 but 0.910 may be exceeded at times.—Chem. & Drug. 1910, v. 76, p. 421.

E. Sachsse & Co. think it not easy to find a really genuine copaiba balsam. They think it absolutely necessary that the bottom limit be lowered to 0.890.—*Ibid.* p. 491. Also Brit. & Col. Drug. 1910, v. 57, p. 241.

Henderson, H. John, notes as a curious fact that the Ph. Brit. IV requires that the copaiba should yield a volatile oil having an optical rotation of from −14° to −17°, yet the monograph for the oil itself defines no limit, and only requires that it should be lævorotatory. He gives the result obtained with a number of different samples of oil.—Pharm. J. 1910, v. 31 (85), p. 139.

Hill and Umney, replying to criticisms, suggest for oleum copaibæ the following test: If distilled in vacuo the first 10 per cent should have a less rotation than that of the original oil (absence of African copaiba).—*Ibid.* p. 437.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 20) report that a single bulk sample of their own distillation gave a specific gravity of 0.9005; optical rotation, −8.3°; boiling point, 253° to 260°.

Henderson, H. John, discusses the physical and chemical properties of oil of copaiba and points out the difficulty of determining the permissible limit of optical rotation.—Year-Book of Pharmacy, 1910, p. 388.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 140) state that they fail to see any reason for departing from the present minimum limit of −7° optical rotation. They have met with oils of normal quality with an even lower optical rotation.

Pearson & Sechler point out that perhaps, if the medicinal copaiba were all obtained from a single species, more accurate standards might be given for oil of copaiba. They think that this subject should be investigated. Samples that they have examined were soluble in 6.5 to 9 parts of 95 per cent alcohol.—Merck's Rep. 1910, v. 19, p. 45.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 40) outline the method for applying Cocking's test for detecting the presence of African copaiba and gurjun balsam oils in oil of copaiba.

Deussen and Philipp report observations on the composition of oil of gurjun balsam.—Chem. Ztg. 1910, v. 34, pp. 921–923. See also Chem. & Drug. 1910, v. 77, p. 454.

Deussen and Hahn report observations on the chemistry and properties of oil of copaiba.—Chem. Ztg. 1910, v. 34, p. 873. See also Chem. & Drug. 1910, v. 77, p. 350.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 45) report that copaiba balsam has lately been used to a somewhat considerable extent in the paint industry.

OLEUM CORIANDRI.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 45) point out that oil of coriander is destined to be high in price, particularly so because it is doubtful whether the cultivation of coriander seed will be taken up again in Moravia and Hungary. Thuringian seed has long ceased to be a factor in the preparation of essential oil.

They also (*Ibid.* April 1910, p. 143), commenting on the requirements proposed by the Second International Congress of the White Cross for oil of coriander, state that they have never known pure oils to rotate below +8°.

Pearson and Sechler report observations on the variation in the solubility of oil of coriander in 70 and 80 per cent alcohol.—Merck's Rep. 1910, v. 19, p. 46.

Hill and Umney suggest for the oil distilled from coriander fruits: Colorless or pale yellow, having the characteristic aromatic odor of the fruit and a warm taste. Specific gravity at 15.5°, 0.870 to

0.885; optical rotation at 20°, +8° to +14°; refractive index at 25°, about 1.463° to 1.467°. Soluble in 3 volumes of 70 per cent alcohol.—Pharm. J. 1910, v. 30 (84), p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 139) consider it useless to determine the percentage of alcoholic constituents of oil of coriander, because in this case the alcohol occurs as linalool, which cannot be acetylated quantitatively.

Simmons, Wm. H., suggests that a standard might be fixed for percentage of alcohols, as determined by acetylation.—Chem. & Drug. 1910, v. 76, p. 304.

Evans Sons Lescher & Webb state as their experience that the specific gravity 0.870 to 0.880 would cover all normal samples of this oil.—*Ibid.* p. 341.

Hill and Umney, replying to criticisms, suggest for oleum coriandri an alcoholic percentage limit, but it is not considered by the authors as of sufficient importance to warrant inclusion in a pharmacopœia.—Pharm. J. 1910, v. 31 (85), p. 437.

Eldred, Frank R., reports that fifteen lots of oil of coriander were found to vary in specific gravity at 15° from 0.866 to 0.912; and in optical rotation from +9.9° to +11.7°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 894.

Pearson and Sechler report that 1 sample of oil of coriander that they have examined had a specific gravity of 0.901. Other U. S. P. requirements were met in all cases. They quote Miller, who states that an authentic sample distilled by him had a specific gravity of only 0.883.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 142.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 20) report that an oil of coriander of good quality had a specific gravity of 0.873; optical rotation, +10.20°; soluble in 3 volumes of 70 per cent alcohol.

OLEUM CUBEBÆ.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 46) report that there is little or no prospect of a decline in the value of oil of cubeb within a reasonable time, because the consumption of cubeb in the United States has increased considerably and better prices are obtainable there than in Germany.

Pearson and Sechler report that the samples of oil of cubeb they have examined all met the U. S. P. specifications. The highest specific gravity noted was 0.917 which is considerably below the maximum U. S. P. limit. They suggest that perhaps the range allowed is too large.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 142.

Heinrich Haensel (Bericht, April–September 1910, p. 20) describes a test for differentiating between fresh and old oil of cubeb by noting the effect on a piece of metallic potassium or sodium. In fresh oil the metal retains its lustre while in the old oil it rapidly becomes covered with a coating of oxide.

Hill and Umney suggest for the oil distilled from cubeb: A colorless to pale green or greenish yellow liquid, with the characteristic odor of cubeb and warm camphoraceous taste. Specific gravity at 15.5°, 0.910 to 0.930; optical rotation at 20°, $-25°$ to $-40°$; refractive index at 25°, 1.486° to 1.500°. At least 80 per cent of the oil should distil between 250° and 280°.—Pharm. J. 1910, v. 30, (84) p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

Evans Sons Lescher & Webb find the specific gravity to vary from 0.915 to 0.930.—Chem. & Drug. 1910, v. 76, p. 341.

Smith, J. Beddall, reports a sample which gave an optical rotation of 23.50°.—Pharm. J. 1910, v. 30, (84) p. 226.

E. Sachsse & Co. state that the distilling process can very easily give rise to wrong conclusions; it should therefore be omitted, all the more as the other tests suffice.—Chem. & Drug. 1910, v. 76, p. 491.

Hill and Umney, replying to criticisms, state that for oleum cubebæ the lower limit of specific gravity, 0.910, is necessary.—Pharm. J. 1910, v. 31 (85), p. 437.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 29) report on 3 samples of cubeb oil: specific gravity, 0.9211 to 0.930; optical rotation, $-25.15°$ to $-31°$.

OLEUM ERIGERONTIS.

Rabak, Frank, states that oil of erigeron is distilled in a small way in connection with the distillation of oil of peppermint. The plant is not cultivated but is cut in the wild condition, no special care being taken to eliminate other aromatic weeds or plants.—Bull. No. 195, Bur. Plant Ind., U. S. Dept. Agric., 1910, p. 38.

Pearson and Sechler state that 1 sample of oil of erigeron examined had a specific gravity of 0.875. It may have been adulterated.—Merck's Rep. 1910, v. 19, p. 45.

Eldred, Frank R., reports that eight lots of oil of erigeron varied in specific gravity at 15° from 0.869 to 0.883; and optical rotation from $+53.6°$ to $+63.6°$.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 894.

OLEUM EUCALYPTI.

Rabak, Frank, states that the production of aucalyptus oil from the leaves and twigs of the blue-gum tree (*Eucalyptus globulus*) is of considerable importance in the volatile oil industry of the United States.—Bull. No. 195, Bur. Plant Ind., U. S. Dept. Agric., 1910, p. 38.

Binz, E. G., in an article on the commercial growing of eucalyptus for oil, comments on the production of the oil of eucalyptus in California.—Pacific Pharmacist, 1909–10, v. 4, pp. 114–117.

Noyes, Reinold, reports that as a matter of fact we find that little of the oil of eucalyptus is distilled from *E. globulus* alone, as there are plenty of other varieties of eucalyptus yielding oils containing cineol to the extent of 50 per cent. He mentions several substitutes and considers this one of the most striking examples of the importance of the chemical analysis of oils.—Proc. Minnesota Pharm. Ass. 1910, p. 75.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 125), in criticising the Ph. Hung. III requirements for oil of eucalyptus, state that requirements for this oil have evidently been confounded with the distillate of *E. amygdalina* Labill., and point out that the oil of *E. globulus* has a specific gravity at 15° of 0.910 to 0.930, and is soluble in any proportion of 90 per cent alcohol.

They also (*Ibid.* p. 130), reviewing the Ph. Ital. III requirements for eucalyptus oil, point out that this oil is colorless, pale yellow, or pale green.

Jeancard and Satie assert that the estimation of cineol as given in the U. S. P. is inexact.—Am. Druggist, 1910, v. 56, p. 42. See also Pharm. Era, 1910, v. 43, p. 143.

Kremers, Edward, expresses the belief that the U. S. P. method of assay for cineol is even at the present time as satisfactory as any of the methods that have been proposed since.—Midl. Drug. 1910, v. 44, p. 3.

Pearson and Sechler report that it is stated that if an excess of sodium nitrite is used, crystals will be formed which may be taken for phellandrene nitrite. The resorcinol method is preferred for the determination of cineol.—Merck's Rep. 1910, v. 19, p. 45.

Rippetoe, John R., also prefers the resorcin method.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1062.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 67) quote the results obtained by Sage as being proof of the uselessness of the phosphoric acid method for the determination of eucalyptus oil.

They also (*Ibid.*, April 1910, p. 143), in commenting on the requirements proposed by the Second International Congress of the White Cross, state that sometimes the eucalyptol content is a little higher than that proposed.

Hill and Umney suggest for the oil distilled from the fresh leaves of *Eucalyptus globulus*, *E. dumosa*, and other species, and rectified: Colorless or pale yellow, having an aromatic camphoraceous odor and a pungent taste, leaving a sensation of coldness in the mouth. Specific gravity at 15.5°, 0.910 to 0.930; optical rotation at 20°, +10° to −10°; soluble in 5 volumes of 70 per cent alcohol. It should contain at least 55 per cent by volume of cineol, when tested according to the process described under oleum cajuputi. If 1 cc. of the oil be mixed with 2 cc. of glacial acetic acid and 5 cc. of petroleum ether, and 2 cc. of a saturated solution of sodium nitrite added, and the mixture gently shaken, no crystalline precipitate should form in the upper layer (exclusion of oils containing much phellandrene).—Pharm. J. 1910, v. 30 (84), p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

Harvey and Wilkie think the suggested standard of 55 per cent of cineol (eucalyptol) is a reasonable one.—Chem. & Drug. 1910, v. 76, p. 421.

E. Sachsse & Co. have found eucalyptus oils, with a higher eucalyptol (cineol) content than 55 per cent, to be soluble in not less than 10 volumes and even more of 70 per cent alcohol.—Brit. & Col. Drug. 1910, v. 57, p. 241. Also Chem. & Drug. 1910, v. 76, p. 491.

Naumann, W., thinks that if the cineol is the valuable constituent for medicinal purposes, a percentage of 70 per cent would not be too low as a minimum.—Chem. & Drug. 1910, v. 76, p. 341.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 135), in commenting on the proposed Ph. Brit. V requirements for oil of eucalyptus, state that they cannot understand how Hill and Umney can recommend so unreliable a method as the determination of cineol by means of phosphoric acid for incorporation into the Pharmacopœia.

W. J. Bush & Co., Ltd., suggest a modification of the phosphoric acid test for cineol. They consider the suggested test for phellandrene too stringent; since by it phellandrene will be detected in most oils having a rotation of −5° or higher.—Chem. & Drug. 1910, v. 76, p. 719.

Hill and Umney, replying to criticisms, state with regard to oleum eucalypti the percentage of eucalyptol (cineol) should be left for decision when the therapeutic value of the substance is settled. Genuine globulus oils usually contain 55 to 65 per cent. The very high-testing Australian oils are less desirable pharmaceutically on account of the irritating aldehyde which produces coughing.—Pharm. J. 1910, v. 31 (85), p. 437.

The New South Wales standards for eucalyptus oil, effective January 1, include solubility in 70 per cent alcohol, 1:3; refractive index at 60° F. below 1.4800°.—*Ibid.* v. 30 (84), p. 48. See also standard adopted for the Commonwealth of Sydney in May, 1910, *Ibid.* v. 31 (85), p. 264. Also Schimmel & Co. (Semi-Annual Report, April 1910, p. 69.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 20) report that a large number of samples of oil eucalyptus were submitted for examination, some of the results being: oils described as globulus oils varied in specific gravity from 0.922 to 0.924; optical rotation, +1.0° to +3.0°. Oils offered merely as Ph. Brit. varied in specific gravity from 0.911 to 0.9145; optical rotation, −7.45° to −9.35°.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 32) report that 3 samples of "water-white" oil of eucalyptus varied in specific gravity from 0.920 to 0.925; optical rotation, −1.38° to 4.48°; cineol content, 72.5 to 76.3 per cent. 26 other samples were tested, some of which had a remarkably high cineol content, this varying from 53 to 89 per cent. They find the phosphoric acid process, carefully worked, to give much more consistent results than the resorcin method advocated by Schimmel.

Scoville, W. L., reports that 5 out of 7 lots of oil of eucalyptus had from 75 to 79.5 per cent cineol. One lot had only 50 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 744.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 66) express the belief that up to the present time it has been by no means proved that the therapeutic value of eucalyptus oil is due to its antiseptic action. As a matter of fact nothing at all is known of its use.

An editorial (Drug Topics, 1910, v. 25, p. 145) states that the therapeutic effects of eucalyptus oils were based on results obtained from using oils containing phellandrene and piperitone, both of which are strongly bactericidal while eucalyptol is said to be only faintly antiseptic.

See also Schimmel & Co. (Semi-Annual Report, October 1910, p. 65).

Brownscombe, W. J., discusses the essential oils of the Ph. Brit. and especially the eucalyptus oil monograph. He calls attention to the work of Cuthbert Hall, whose results are summarized as follows: (1) Pure eucalyptol practically possesses but very feeble antiseptic powers; (2) phellandrene and piperitone are strongly bactericidal, and are the constituents which largely give eucalyptus oils therapeutic value.—Chem. & Drug. 1910, v. 76, p. 670.

An editorial (Pharm. J. 1910, v. 30 (84), p. 1), commenting on the above situation, urges the need for valuable research work as to the therapeutic value of the different species of oils.

An editorial (N. York M. J., 1910, v. 91, p. 1021) calls attention to the recent work of P. Wijn (*Janus*, March) on the use of oil of eucalyptus in ankylostomiasis, at the Polyclinic in Ngawi, Java.

Buckley, J. P., in discussing the utilization of oil of eucalyptus in dental practice, states that the oil distilled from *E. globulus* leaves does not have the irritating properties of the impure eucalyptus oil.—Dental Cosmos, 1910, v. 31, p. 433.

Gilmour, D. (Brit. Dent. J.) says that the eucalyptol or cineol constituent of this oil is highly antiseptic and stimulant to the mucous membranes, and has been used for stomatitis in alcoholic solutions.—Pharm. J. 1910, v. 30 (84), p. 644.

Kirkness, W. Ronald, reports 2 cases of poisoning by oil of eucalyptus.—Brit. M. J. 1910, v. 1, p. 261.

OLEUM FŒNICULI.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 125), in a review of the Ph. Hung. III requirements for oil of fennel, point out that in certain conditions fennel oil is capable of being cooled down considerably without being solidified. The congealing point of a good oil is not below +4°.

Noyes, Reinold, notes that there are two oils of fennel on the market, the bitter and the sweet. The sweet oil is worth twice as much as the bitter, and is the one that resembles the anise closely. The bitter oil contains much less anethol and more of the bitter ketone called fenchone, which distinguishes it and reduces its value.—Proc. Minnesota Pharm. Ass. 1910, p. 72.

Pearson and Sechler report that one sample of oil of fennel had a specific gravity of 0.975, which rendered it suspicious.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania. Pharm. Ass. 1910, p. 142.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 143), commenting on the requirements proposed by the Second International Congress of the White Cross, state that they have never known the specific gravity of oil of fennel to exceed 0.977.

Hill and Umney suggest for the oil distilled from *Fœniculum vulgare:* Nearly colorless or pale yellow, having the characteristic odor of fennel and a pungent taste. Specific gravity at 15.5°, 0.960 to 0.990; optical rotation at 20°, +6° to +20°; refractive index at 25°, 1.525° to 1.534°. Soluble in an equal volume of 90 per cent alcohol. The melting point after solidification should not fall below +4°.—Pharm. J. 1910, v. 30, p. 180. Also Chem. & Drug. 1910, v. 76, p. 273.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 138), in commenting on the proposed Ph. Brit. V requirements for oil of fennel, state that the specific gravity limits may be drawn closer; at 15° the values lie between 0.965 and 0.977. The optical rotation should range between +11° and +24°. It is desirable to demand that the congealing point shall not be below +4°. In order to ascertain this point the oil should be cooled down to about 2° or 3° and a little solid anethol introduced into it.

Smith, J. Beddall, reports a sample, genuine in other respects, which had an optical rotation of +5.45°.—Pharm. J. 1910, v. 30 (84), p. 226.

W. J. Bush & Co., Ltd., find that as a rule their distillates from sweet fennel fruit give higher figures than those generally accepted, and than those proposed by Hill and Umney. Their data are: specific gravity, 0.970 to 0.982; optical rotation, +5° to +8°; melting point of the congealed oil, 7° to 14°.—Chem. & Drug. 1910, v. 76, p. 719.

Harvey and Wilkie find that, as with anise oil, the solidification temperature is a better index of a sufficient anethol content than the melting point.—*Ibid.* p. 421.

Eldred, Frank R., reports that six lots of oil of fennel were examined and found to vary in specific gravity at 15° from 0.964 to 0.975; optical rotation from +13.3° to +17.1°; and congealing point from 3° to 5°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 894.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 21) report that 3 samples of oil of fennel examined were all of satisfactory quality; specific gravity, 0.962 to 0.969; optical rotation, +14.78° to +15.78°; congealing point, +3° to +5°.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 33) report that one abnormal sample of fennel oil, but apparently genuine, had a specific gravity of 0.9766; refractive index, 1.5314°; optical rotation +14.15°, and was soluble in 6 volumes of 80 per cent alcohol. It only froze at −2° on seeding with anethol, and it had a congealing point +2°, and melting point +4°.

OLEUM GAULTHERIÆ.

Rabak, Frank, in discussing the production of the oils of wintergreen and of birch states that while derived from unrelated plants the oils for all practical purposes are identical.—Bull. No. 195, Bur. Plant Ind., U. S. Dept. Agric., 1910, p. 38.

Wiley, H. W., reports that the supply of true oil of wintergreen is extremely small and investigation showed that a large proportion of the so-called oil of wintergreen consisted largely of mixtures of methyl salicylate and oil of sweet birch.—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 440.

Kremers, Edward, reports comparative experiments in the production of oil of wintergreen. South Carolina wintergreen yielded only 1 per cent and the Wisconsin wintergreen yielded 1.4 per cent of oil.—Proc. Wisconsin Pharm. Ass. 1910, p. 36.

Beringer, George M., presents a note on oil of gaultheria in which he reports the specific gravity and optical rotation of 2 samples of known origin.—Am. J. Pharm. 1910, v. 82, pp. 437–438. Also Proc. New Jersey Pharm. Ass. 1910, pp. 57–58.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 142) report that the oil from *Gaultheria procumbens* is consumed exclusively in America.

Noyes, Reinold, states that the oil of wintergreen leaves, true, was withdrawn from the market immediately after the pure food law went into effect, because it had been customary for years, to distil the bark of sweet birch and the leaves of wintergreen together so that the oil on the market was a mixture of the two.—Proc. Minnesota Pharm. Ass. 1910, p. 71.

Davis, James E., points out that the oil of betula is worth 3 times what methyl salicylate is, and oil of gaultheria is worth over double the price of oil of betula, and yet, all 3 of these articles test practically alike.—Proc. Michigan Pharm. Ass. 1910, p. 63.

Pearson and Sechler point out that oil of gaultheria is difficult to distinguish from oil of betula and methyl salicylate. The slight deviation of polarized light is not sufficient to be used as an indication of purity, especially as the oil itself is usually colored, which renders the reading difficult.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 142.

The Committee on Adulterations reports that synthetic methyl salicylate is sometimes dispensed as an equivalent for oil of gaultheria, and points out that more efficient distinguishing tests, as well as a method for the detection of the synthetic oil as an adulterant, are imperative.—Proc. New. York Pharm. Ass. 1910, p. 169.

Noyes, Reinold, thinks it idealism pure and simple that leads some to prefer the natural wintergreen oils to the synthetic and particularly to pay a fancy price for the oil from the leaves of gaultheria.—Proc. Minnesota Pharm. Ass. 1910, p. 79.

Davis, James E., asserts that there are three or four houses in New York which have discontinued selling oil of gaultheria; they claim it is impossible to get any. A representative of one of these says that by actual test the distillation of this oil would cost in the neighborhood of sixteen dollars a pound.—Proc. Michigan Pharm. Ass. 1910, p. 74.

Mason, H. B., asserts that the next Pharmacopœia will declare that oil of wintergreen, oil of betula and methyl salicylate are identical and will render it impossible in the future for Food and Drug Acts or for the colleges to make any distinction. He believes also that the next Pharmacopœia will be less rigid, less arbitrary in establishing standards of that kind.—*Ibid.* p. 71.

Hall states that oil of wintergreen [methyl salicylate] while it has considerable odor has not the strong distinctive taste of oil of betula or gaultheria true.—*Ibid.* p. 70.

Beilstein, Christian, reports having devoted considerable attention to the problem presented by the traffic in oil of gaultheria, and asserts that while conditions have materially improved the total quantity of true oil of gaultheria distilled is in no reasonable proportion to the aggregate of the stuff that finds its way into consumption labeled as true oil of wintergreen.—Proc. N. W. D. A. 1910, p. 98.

Hill and Umney suggest as a synonym, oil of wintergreen: The oil obtained by distillation from *Gaultheria procumbens.* This being practically identical with oleum betulæ [q. v.] one monograph will suffice.—Pharm. J. 1910, v. 30 (84), p. 180. Also Chem. & Drug. 1910, v. 76, p. 273.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 26) note that it is suggested to add the oils of gaultheria and sweet birch to the forthcoming Ph. Brit. In their opinion however the inclusion of the cheaper synthetic methyl salicylate would be preferable to the pharmacist and equally satisfactory to the medical profession.

E. Sachsse & Co. propose the introduction of artificial oil of wintergreen or pure methyl salicylate.—Chem. & Drug. 1910, v. 76, p. 491.

W. J. Bush & Co., Ltd., think the difference in flavor between the natural oil and the synthetic product so slight that there is no reason why pure methyl salicylate should be excluded. They would favor the inclusion of both.—*Ibid.* p. 719.

Xrayser II thinks that genuine oil of wintergreen can hardly be mistaken for synthetic methyl salicylate by those who were accustomed to handle the natural oil before the artificial product came into common use. As to mixtures of the two, not even an expert could give any approximation to the amount of either of the oils present.—*Ibid.* p. 289.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 138), in commenting on the proposed Ph. Brit. V requirements for oil of wintergreen, point out that the natural oils generally have a reddish color, due to traces of iron. The maximum limit for specific gravity should be raised to 1.188. Wintergreen oil dissolves, 1 volume in 5 to 7 of 70 per cent alcohol. The requirement for methyl salicylate content should be reduced to 98 per cent.

Sayre, L. E., reports on 3 samples of oil of gaultheria: 2 passed; 1 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1096.

Gilmour, D. (Brit. Dent. J.) notes that oil of gaultheria is perhaps used in the United States more universally than any other flavoring for tooth-powders, soaps, pastes, and mouth washes. The refreshing and stimulating effects in the mouth seem unattended by any injurious results. As a root canal dressing it is not sufficiently antiseptic to be of any particular use.—Pharm. J. 1910, v. 30 (84), p. 644.

OLEUM GOSSYPII SEMINIS.

Brodé, Julien, in a discussion of the world's olive trade, makes some interesting comments on the increasing production, use and value of cotton seed oil.—Cons. & Tr. Rep. Sept. 3, 1910, pp. 689–692.

An editorial (Chem. & Drug. 1910, v. 77, p. 962) discusses the linseed and cotton seed oil markets, and gives statistics for the past 3 years. See also *Ibid.* p. 311.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 78, December 5, p. 7) discusses the economic condition of the cotton seed oil market. See also *Ibid.* v. 77, May 9, p. 7.

Gane, E. H., found 1 barrel of cotton seed oil mixed with soya bean oil. Owing to the high price of cotton seed oil immense quantities of soya bean oil have been imported and in many cases used for the former.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 745.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 28) report that 6 samples of cotton seed oil had a specific gravity of from 0.922 to 0.923; refractive index +14° to +15°.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 9) report 4 samples of cotton seed oil examined, all gave pronounced reactions with both Halphen and Becchi tests.

Thome, E. R., states that many physicians prefer emulsion of cotton seed oil to cod liver oil. He thinks a 50 per cent emulsion should be admitted.—Practical Druggist, 1910, v. 28, p. 122.

Friemann, Ferdinand (Inaug.-Diss., Bern, 1909, 43) reports a study on cotton seed meal for the purpose of determining its toxic action. He concludes that the cases of poisoning following the use of cotton seed meal as cattle food were due to ptomaines analagous to neurin or muscarin.—Biochem. Centralbl., 1909–10, v. 9, p. 888.

OLEUM HEDEOMÆ.

Rabak, Frank, states that pennyroyal is distilled for its oil principally in Ohio and North Carolina, with smaller operations in intermediate States. The yield of oil distilled from the fresh flowering herb varies from 0.6 to 1 per cent.—Bull. No. 195, Bur. Plant Ind., U. S. Dept. Agric., 1910, p. 40.

Noyes, Reinold, says that oil of hedeoma is a modern substitute for the oil of pennyroyal and sells for a higher price, probably owing to the fact that it is recognized while the other is not.—Proc. Minnesota Pharm. Ass. 1910, p. 77.

Jeancard and Satie think that the minimum content of pulegone in oil of pennyroyal should have been given.—Am. Druggist, 1910, v. 56, p. 42. Also Pharm. Era, 1910, v. 43, p. 143.

Pearson and Sechler think that the upper limit for optical rotation for oil of pennyroyal should be raised to +26°, as samples from authentic sources have been this high.—Merck's Rep. 1910, v. 19, p. 45.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 93) report that this season some parcels of American oil of pennyroyal show an abnormal optical rotation and are therefore not in accordance with the requirements of the Pharmacopœia. They also report that the American variety of pennyroyal has not been exported to Europe for many years past as it is unable to compete with the cheap European oils.

Gane, E. H., reports on 2 samples of oil of pennyroyal: specific gravity, 0.919; rotation, +9.0°; specific gravity, 0.922; rotation, +8.50°. Both had poor odor.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 745.

Eldred, Frank R., reports that fourteen lots of oil of hedeoma were examined and found to vary in specific gravity at 15° from 0.926 to 0.932; and optical rotation from +18° to +31°. They were soluble in from 1.5 to 3.5 volumes of 70 per cent (by volume) alcohol.—*Ibid.* p. 894.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 23) report that the only sample of European pennyroyal oil examined proved to be a normal sample. The specific gravity was 0.9365; optical rotation +18.82°; soluble in 2 volumes of 70 per cent alcohol.

OLEUM HYOSCYAMI COMPOSITUM N. F.

Raubenheimer, Otto, in discussing the formula for the compound oil of hyoscyamus, expresses the belief that by increasing the amount of essential oil from 2 to 10 drops, the aromatic odor can be greatly improved.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1232.

OLEUM JUNIPERI.

LaWall and Bradshaw report finding 2.3 and 2.8 per cent ash in juniper berries.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 37 point out that the Ph. Germ. V permits a maximum ash content of 5 per cent in juniper berries.

Pearson and Sechler report that samples of oil of juniper that they have examined, all from reliable sources, have had specific gravities from 0.856 to 0.860. Perhaps the U. S. P. specifications should be revised. The introduction of solubility tests may not be advisable, they think, as they are informed, that the solubility rapidly changes, it being soluble in 10 parts of 10 per cent alcohol directly from the still.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 142.

Jeancard and Satie state that it is unusual to obtain a pure oil of juniper soluble in 10 volumes of 90 per cent alcohol.—Am. Druggist, 1910, v. 56, p. 42. Also Pharm. Era, 1910, v. 43, p. 143.

Noyes, Reinold, states that as we have not discovered the odorous principle of juniper it is impossible to judge its merit by chemical analysis. The imitation oil which is on the market is supposed to be made by distilling turpentine out of juniper wood.—Proc. Pennsylvania Pharm. Ass. 1910, p. 74.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 125), in a review of the Ph. Hung. III requirements for juniper oil, point out that the specific gravity of oil of juniper at 15° lies between 0.860 and 0.885. See also *Ibid.*, p. 130 for their review of the Ph. Ital. III. requirements for juniper berry oil.

Hill and Umney suggest for the oil distilled from the ripe fruit of *Juniperus communis* and rectified: Colorless or pale yellowish green, with the characteristic odor of the fruit and a warm aromatic bitter taste. Specific gravity at 15.5°, 0.862 to 0.890, increasing with age; optical rotation at 20°, $-3°$ to $-12°$; refractive index at 25°, 1.472° to 1.488°. Soluble when freshly distilled in 4 volumes of 95 per cent alcohol, becoming less soluble with age.—Pharm. J. 1910, v. 30 (84), p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

Allen, E. Watlock, suggests a specific gravity of 0.865 to 0.890.—Pharm. J. 1910, v. 30 (84), p. 317.

Stafford Allen & Sons, Ltd., think the minimum specific gravity limit might be 0.865 or even 0.870. A typical normal oil recently distilled from ripe juniper berries furnished these figures: specific gravity, 0.8751; optical rotation, $-10°$; solubility in 95 per cent alcohol, 1 in 2.5.—Chem. & Drug. 1910, v. 76, p. 372.

Heine & Co. suggest that the minimum limit of specific gravity be stated as 0.860.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 135), in commenting on the proposed Ph. Brit. V requirements for juniper oil, state that the minimum limit for juniper oil is too low; it should be 0.860. They think that for optical rotation the following values would be more in accordance with facts, viz., up to $-15°$. Freshly distilled oils are soluble, 1 volume in 5 to 10 of 90 per cent alcohol.

Harvey and Wilkie think that as the optical rotation of genuine oils from reputable sources frequently exceeds $-12°$, an upper limit of $-16°$ would be more reasonable. The minimum limit for specific gravity should be 0.865.—Chem. & Drug. 1910, v. 76, p. 421.

Brewis, Theo., finds that some oils having a juniper rather than a turpentine odor have a higher gravity than that suggested by Hill and Umney.—Pharm. J. 1910, v. 30 (84), p. 182.

E. Sachsse & Co. consider the requirements of the Ph. Brit. IV better than the proposals of Hill and Umney.—Chem. & Drug. 1910, v. 76, p. 491. Also Brit. & Col. Drug. 1910, v. 57, p. 241.

Naumann, W., states that if the cheap Hungarian "by-product" is used medicinally, it is certainly necessary to reduce the specific gravity from 0.865 to 0.862; as it is, much oil is adulterated with turpentine to bring it up slightly.—Chem. & Drug. 1910, v. 76, p. 341.

Hill and Umney, replying to criticisms, state with regard to oleum juniperi that the optical rotation might be increased to $-15°$, though the authors' records show that practically all pure samples fall below 12°. The refractive index of highest fractions is of decided value.—Pharm. J. 1910, v. 31 (85), p. 437.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 21) report that the results obtained by the examination of 8 commercial samples of oil of juniper confirm the value of the refractive index.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 39) report on 4 samples of genuine juniper berry oil: specific gravity, 0.8655 to

0.868; optical rotation, −3° to −5.6°; boiling point, 153° to 164°. One sample from the Tyrol, probably quite genuine, had abnormal characters: specific gravity, 0.868; optical rotation, −2°; refractive index, 1.4737°; commenced to distil at 165.5°.

Schimmel & Co. (Semi-Annual Report, October 1910, pp. 72–73) present some additional observations on the terpene fractions of oil of juniper.

OLEUM LAVANDULÆ FLORUM.

An editorial (Chem. & Drug. 1910, v. 77, p. 312) calls attention to a recent article in the [London] *Times* on the cultivation of English lavender.

Lamothe, L., contributes a note on lavender in England, a reply to an article by Walter Gilbey in *The Perfumer*.—Bull. sc. pharmacol. 1910, v. 17, pp. 348–353.

Xrayser II presents a brief note on the history of lavender, apropos of the use of its oil as a preventive of flea-bites.—Chem. & Drug. 1910, v. 77, p. 411.

Delpy, Hedwig, reports a pharmacognostical study of *Lavandula vera* D. C.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, p. 283.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 33) point out that the Ph. Germ. V requires lavender flowers to be derived from *Lavandula spica* Linne instead of *L. vera*.

LaWall and Bradshaw report finding 6.6 per cent ash in lavender flowers.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Rusby, H. H., states that he has met with lavender flowers spoiled in drying and then colored with an artificial dye.—Practical Druggist, 1910, v. 27, p. 424.

Noyes, Reinold, calls attention to the different qualities of lavender oil on the market and adds that the Mitcham or English oil which does not contain so much linalool, is preferred by some on account of its sweet odor.—Proc. Minnesota Pharm. Ass. 1910, p. 76.

Rippetoe, John R., thinks that an optical rotation standard should be given for the oil of lavender flowers. He has examined samples of this oil and found them to be dextrogyrate and of an inferior odor, while oils of desirable odor were always lævogyrate.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1062.

Jeancard and Satie propose to classify oil of lavender in two groups; the first, lavender of the high Alps, containing from 35 to 47 per cent of ethers, and the second, the products of the Italian Alps, containing from 20 to 30 per cent of ethers.—Am. Druggist, 1910, v. 56, p. 42. See also Pharm. Era, 1910, v. 43, p. 143.

Heine & Co. think it would be better to enter the French and English oil separately into the Pharmacopœia, because they differ in odor, and especially in the contents of esters.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 126) in a review of the Ph. Hung. III requirements for oil of lavender, assert that this oil is frequently also pale yellow and that almost all oils of lavender show a trace of free acid.

They also (*Ibid.* April 1910, p. 131) review the Ph. Ital. III requirements for lavender oil.

Pearson and Sechler state that samples containing castor oil would fulfill all the U. S. P. tests and have a higher saponification value, indicating a greater per cent of linalyl acetate than the amount present.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 142.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 143), commenting on the requirements proposed by the Second International Congress of the White Cross, state that the specific gravity should be 0.882–0.895. It is advisable to suspect all oils of which the ester content falls below 30 per cent.

Hill and Umney suggest for the oil distilled from the flowers of *Lavandula vera,* cultivated in England, France and other countries: Pale yellow or yellowish green, with the fragrant odor of the flowers, and a pungent slightly bitter taste. Specific gravity at 15.5°, 0.883 to 0.900; optical rotation at 20°, $-3°$ to $-10°$. Soluble in 3 volumes of 70 per cent alcohol. The English oil should contain from 7 to 11 per cent of esters and the foreign oil not less than 30 per cent of esters, calculated as linalyl acetate, as determined by saponification with alcoholic potash.—Pharm. J. 1910, v. 30 (84), p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

Parry, E. J., cannot imagine why the foreign oils should contain not less than 30 per cent of esters. Oil made from plants grown on the Italian frontier, which gave a very sweet odor, contained no more than 25 per cent of esters, calculated as linalyl acetate.—Pharm. J. 1910, v. 30 (84), p. 181.

Simmons, Wm. H., suggests that the minimum limit of 30 per cent of esters, calculated as linalyl acetate, for foreign oils is much too high. Some of the very finest oils he has ever examined contained only 23 to 25 per cent of esters.—Chem. & Drug. 1910, v. 76, p. 304.

Naumann, W., thinks a 30 per cent ester limit would exclude innumerable pure oils, some of the finest of which give as low a content as 22 per cent.—*Ibid.* p. 341.

Evans Sons Lescher & Webb think the limit of 30 per cent esters for foreign oils rather high. They have in some seasons had genuine oils of good quality as low as 28 per cent.—*Ibid.* p. 341.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 136), in commenting on the proposed Ph. Brit. V requirements for lavender oil, state that oils with a high ester content (40 per cent and over) are sometimes less soluble than the required 1 volume in 3 of 70 per cent alcohol.

E. Sachsse & Co. have never observed a higher specific gravity for pure oils than 0.895, and would prefer to have the top limit lowered to this figure, as the addition of artificial esters would thus be made more difficult.—Chem. & Drug. 1910, v. 76, p. 491. Also Brit. & Col. Drug. 1910, v. 57, p. 241.

Henderson, H. John, discusses the physical and chemical properties of oil of lavender and points out some of the difficulties of establishing fixed and definite properties.—Year-Book of Pharmacy, 1910, pp. 389–390. Also Pharm. J. 1910, v. 31 (85), p. 140.

Hill and Umney, replying to criticisms, suggest for oleum lavendulæ a minimum percentage (30) of ester.—Pharm. J. 1910, v. 31 (85), p. 437.

Hill and Umney state that the present Ph. Brit. tests for lavender oil do not exclude adulterated oils. In fact it would be quite easy to produce a mixture innocent of lavender oil, which should pass the characters and tests of the present official monograph.—*Ibid.*, v. 30 (84), p. 178. Also Chem. & Drug. 1910, v. 76, p. 271.

Elze, F., reports finding nerol and thymol in French oil of lavender.—Chem. Ztg. 1910, v. 34, p. 1029.

Eldred, Frank R., reports that thirteen lots of oil of lavender flowers varied in specific gravity at 15° from 0.886 to 0.903; optical rotation from $-3°$ to $-6.7°$; and ester number from 90 to 98. They were soluble in 2 to 3 volumes of 70 per cent (by volume) alcohol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 894.

Gane, E. H., reports that assays of two samples of oil of lavender showed 40.56 and 29.54 per cent linalyl acetate.—*Ibid.*, p. 745.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 22) report that oils of a foreign origin with 1 exception showed: specific gravity, 0.8885 to 0.8960; esters as linalyl acetate, 31.96 to 35.22 per cent.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 139) regard the demand for a minimum of 30 per cent of linalyl acetate as thoroughly justified.

Parry, Ernest J., discusses the origin and nature of spike lavender and reports the constants of 4 samples of pure spike oil of undoubted authenticity.—Am. Perf. 1910–11, v. 5, pp. 114–115.

Havenhill, L. D., outlines a formula for the compound tincture of lavender.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 789.

OLEUM LIMONIS.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 48–52) present tables showing the comparative exports of essential oils from Sicily and Calabria in 1907 and 1908.

An unsigned article (Oil, Paint and Drug Reporter, 1910, v. 78, October 10, p. 28F) reviews the Sicilian essences in retrospect and prospect.

Roure-Bertrand Fils (Sc. & Ind. Bull. October 1910, p. 54) report that the 1909 harvest of oil of lemon was a very plentiful one, since the production of essential oil may be estimated at about 800,000 kilos.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 54) point out that one of the reasons for the untoward conditions in the lemon industry in Sicily is the fact that within the last 20 years lemon plantations have been laid down in California and Florida, and have almost entirely freed the United States from its previous dependency for this fruit upon Italy and Spain.

Kleber, Clemens, discusses the U. S. P. requirements and comments on the properties and chemical composition of oil of lemon and oil of orange.—Am. Perf. 1910–11, v. 5, pp. 93–94.

Jeancard and Satie think that the estimation of citral should be omitted until the exact method of estimating small quantities of aldehyde is discovered.—Am. Druggist, 1910, v. 56, p. 43. Also Pharm. Era, 1910, v. 43, p. 143.

Kremers, Edward, states that the U. S. P. VIII assay method for oil of lemon was introduced to comply with a general clamor for chemical methods of assay, and points out that the fact that the method was made valueless by the substitution of a new indicator for the one recommended was not the fault of those who suggested the method.—Midl. Drug. 1910, v. 44, p. 3.

Pearson and Sechler think that such excellent work has been done with oil of lemon by the Government experts that better standards and tests can certainly be furnished by them. Personally, they do not think the present assay method is either accurate or valuable.-- Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 142.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 61–68) call attention to and present abstracts from 2 pamphlets recently issued by the U. S. Department of Agriculture dealing with the production of oil of lemon, citrate of lime and lemon peel in Sicily and Calabria.

Dodge says that, since the Government has decided that pinene is not a natural constituent of lemon oil, "nature" has stopped putting any in that offered for importation. He thinks the Chase test the only satisfactory one for citral.—Apothecary, 1910, v. 22, No. 2, p. 13.

Notice of Judgment No. 393 relates to misbranding of oil of lemon.

Leuders, George, says that under present regulations it is impossible to admit oils adulterated with washed or exhausted oil of lemon or C. P. citral.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 745.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 126), in commenting on the Ph. Hung. III requirements for oil of lemon, state that 0.857 would be a correct value for the minimum specific gravity.

They also (*Ibid.* April 1910, p. 129), review the Ph. Ital. III requirement for citron oil.

Hill and Umney suggest: The oil obtained by expression by various methods from fresh lemon peel. Pale yellow, with the fragrant odor of lemons, and a warm slightly bitter after taste. Specific gravity at 15.5°, 0.857 to 0.860; optical rotation at 20°, +53° to +64°; refractive index at 25°, 1.474° to 1.476°. Should contain at least 3.5 per cent cf citral.—Pharm. J. 1910, v. 30 (84) p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

E. Sachsse & Co. think that as long as there is no reliable method of determining the content of citral in a really easily practicable way, it seems absolutely useless to put up a citral standard at all.—Chem. & Drug. 1910, v. 76, p. 491. Also Brit. & Col. Drug. 1910, v. 57, p. 241.

Heine & Co. think that the oil of lemon should contain more citral than only 3.5 per cent fixed by Hill and Umney as the minimum.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 136), in connection with the proposed Ph. Brit. V requirements for lemon oil, state that they regard 0.861 as the more correct maximum value for specific gravity.

Harvey and Wilkie think the suggested limits for optical rotation are somewhat restrictive, +56° to +66° would include all genuine oils.—Chem. & Drug. 1910, v. 76, p. 421.

Hill and Umney, replying to criticisms, state that for the determination of citral, the hydroxylamine method as modified by A. H. Bennett is the most suitable, although it appears to give results which are about 10 per cent too low.—Pharm. J. 1910, v. 31 (85), p. 437.

An editorial (Am. Perf. 1910–11, v. 5, p. 260) calls attention to some recent communications on citral tests, and points out that so far as the United States is concerned the question of citral determination is of importance more particularly in the case of terpeneless flavoring extracts.

Gane, E. H., says that the washed oil of lemon is a very poor product. Seems to be lemon oil from which the citral has been largely extracted. It has specific gravity 0.843; rotation, +60.25°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 745.

Bachman, G., reports that four samples of oil of lemon assayed from 1.69 per cent to 3.76 per cent citral.—Proc. Minnesota Pharm. Ass. 1910, p. 64.

Wulling, Frederick J., reports that 4 samples of oil of lemon assayed from 1.69 to 3.76 per cent of citral.—Northwestern Druggist, 1910, v. 11, Sept., p. 25.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 42) report on 22 consignments of oil of lemon.

Chace, E. M., in the referee report on flavoring extracts, outlines methods for the determination of citral, the determination of total aldehydes, and the detection of pinene.—Proc. Ass. Off. Agric. Chem. 1910, 27th Ann. Conv., pp. 72–73. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137).

OLEUM LINI.

An editorial (Chem. & Drug. 1910, v. 77, p. 962) discusses the linseed and cotton seed oil markets, and gives statistics for the past 3 years.

See also editorials, Drug. Circ. 1910, v. 54, p. 499, and Pharm. J. 1910, v. 31 (85), p. 338, on the linseed oil situation.

Dohme and Engelhardt state that the Ph. Hung. III directs that the acid number for linseed oil should be less than 2, the iodine number, for the determination of which 0.3 gm. are taken, should be between 170 and 180.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1188.

Hill, Charles Alex., asserts that the iodine number of linseed oil is frequently higher than 190. Moreover, with the exception of Perilla oil, which is comparatively rare, no oil is known to have as high an iodine value as linseed.—Pharm. J. 1910, v. 31 (85), p. 780.

Bird and Lucas suggest saponification value, 187 to 195; iodine value, 170 to 190; specific gravity, 0.930 to 0.940; free acid, not exceeding 1.5 per cent; refractive index, at 15°, 1.4832° to 1.4844°. Unsaponifiable matter under 1 per cent.—*Ibid.*, pp. 470, 471.

Eldred, Frank R., reports that twenty-seven lots of linseed oil varied in specific gravity at 15° from 0.932 to 0.934; in index of refraction at 20° from 1.4000° to 1.4815°; iodine value (Wijs) from 171.0 to 200.0; and saponification value from 187.5 to 196.8.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 895.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 11) report that out of 7 samples of linseed oil examined during the year they have met with 3 with which the results obtained were such as to compel their description as impure oils.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 44) report that the tests applied to linseed oil for therapeutic purposes are of course not those of technical importance. The small variations observed in the values during the last 3 years are specific gravity 0.930 to 0.935; refractive figure +48° to +52.5°.

Committee E, of the American Society for Testing Materials, outlines specifications for testing linseed oil.—J. Soc. Chem. Ind. 1910, v. 29, p. 437.

Fahrion, W., discusses the composition of linseed oil and presents a resumé of his findings.—Ztschr. ang. Chem. 1910, v. 23, pp. 1106–1108. See also pp. 722–726.

Eisenschiml and Copthorne discuss the compounds formed by brominating fish oils and linseed oil, and suggest that this be used as a basis for detecting the admixture of fish oils in linseed oil.—J. Ind. & Eng. Chem. 1910, v. 2, p. 43. See also pp. 28–29.

Thompson, G. W., discusses the scientific preparation and application of paint.—*Ibid.* pp. 87–92.

OLEUM MENTHÆ PIPERITÆ.

Rudd, F. M., of Bronson, Mich., states that the total production and carried over stocks of American peppermint oil is about 260,000 to 265,000 lb., as against 335,000 to 340,000 lb. at the same time last year.—Chem. & Drug. 1910, v. 77, p. 874.

Rabak, Frank, states that the distillation of peppermint in the United States dates back to 1816, when the peppermint plant was first cultivated for the production of oil in New York.—Bull. No. 195, Bur. Plant Ind., U. S. Dept. Agric., 1910, p. 35.

Schimmel & Co. (Semi-Annual Report, October 1910, pp. 93–95) discuss the production of oil of peppermint in various sections of the United States and present a table showing the details of the exports of peppermint oil from the United States during the past 5 years.

Umney, John C., presents some observations on the growing of peppermint and the method of distilling the oil and the character of the oils of peppermint produced in various parts of the world.—Brit & Col. Drug. 1910, v. 58, pp. 503–504.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 86–89) discuss the preparation and the properties of American, English, Japanese and Saxon oils of peppermint.

Heinrich Haensel (Bericht, April-September 1910, pp. 39–43) discusses the economic conditions of the oil of peppermint market, and calls attention to some of the characteristics of the different oils.

Wiley, H. W., reports that a sample of California peppermint oil was found to contain an unduly large amount of menthol.—Ann. Rep. U. S. Dept. Agric., 1910, 1911, p. 441.

Jeancard and Satie state that the analytical procedures of the Pharmacopœia for the estimation of menthol are inexact.—Am. Druggist, 1910, v. 56, p. 43. Also Pharm. Era, 1910, v. 43, p. 143.

Noyes, Reinold, asserts that the ease with which oil of peppermint can be robbed of its menthol, the principal flavoring constituent, causes a general prevalence of dementholized oils on the market. He has seen a large number of samples which contained about 10 to 20 per cent.—Proc. Minnesota Pharm. Ass. 1910, p. 74.

Eliel, Leo, states that the menthol content of the oil of peppermint depends very largely on the climatic conditions at the time the crop is harvested. There have been a number of seasons in the last ten years when it would have been absolutely impossible to obtain oil which would come up to the requirements of the U. S. P. and the Pure Food Act.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 807.

Kremers, Edward, states that the peppermint oil of the U. S. P. is a rectified oil, and any crude but "pure" oil can be made to meet the U. S. P. standards by rectification.—Midl. Drug. 1910, v. 44, p. 2.

Rippetoe, John R., asserts that oils of peppermint known to be rectified will at times give a white film if allowed to stand, and he suggests that a "short time" should be changed to read "after 10 minutes."—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1062.

Schimmel & Co. (Semi-Annual Report, April, 1910, p. 126), in commenting on the Ph. Hung. III requirement for oil of peppermint, point out that this oil almost always contains a trace of free acid. They also (*Ibid.* April 1910, p. 131) review the Ph. Ital. III requirements for peppermint oil.

An unsigned article (Chem. & Drug. 1910, v. 77, p. 687) calls attention to the wide latitude allowed by the Ph. Russ. VI in the specific gravity of oleum menthæ piperitæ; 0.900 to 0.910.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 144) in commenting on the standards proposed by the Second International Congress of the White Cross, regard the giving of separate values for total menthol, free menthol and esterified menthol as quite unnecessary and as needlessly complicating the examination.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 23) report on the specific gravity of English, American and Japanese oils of peppermint.

Irk, Karl, reports on the physical and chemical properties of Hungarian oil of peppermint.—Pharm. Zentralh. 1910, v. 51, pp. 889–892.

Parry, Ernest J., presents a note on a new, but not yet identified, adulterant of peppermint oil, apparently an oil whose refractive index is 1.430 and optical rotation −12°.—Chem. & Drug. 1910, v. 76, p. 293.

Hill and Umney suggest for the oil distilled from the fresh flowering peppermint, *Mentha piperita;* rectified, if necessary, by redistillation. Colorless, pale yellow, or greenish yellow, having the characteristic odor of the herb, and a pungent aromatic taste, followed by a sensation of coldness in the mouth. Specific gravity at 15.5°, 0.900 to 0.920; optical rotation at 20°, −20° to −35°. Soluble in 4 volumes of 70 per cent alcohol. Should contain at least 50 per cent of total menthol, free and combined, determined by the acetylation process, and not less than 6 per cent esters, calculated as menthyl acetate, as determined by saponification with alcoholic potash.—Pharm. J. 1910, v. 30 (84), p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

Naumann, W., asserts that, in view of the decreased solubility of American oils, it will probably soon be necessary to redistil all oils if a solubility of one volume in 4 volumes of 70 per cent alcohol is required.—Chem. & Drug. 1910, v. 76, p. 341.

W. J. Bush & Co., Ltd., give their records from large bulks of oil as: specific gravity, 0.9010 to 0.9168; optical rotation, −22.8° to −37°; soluble 1 : 2.5 to 1 : 4 volumes and more of 70 per cent alcohol.—*Ibid.* p. 719.

Heine & Co. states that it is generally known that the various kinds of peppermint oil, English, American, German, and up to a certain degree also the liquid Japanese oil, do not show any great difference in their physical characters and chemical composition, especially after being rectified.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 136), in commenting on the Ph. Brit. V requirements for peppermint oil, state that as the values relating to specific gravity also include American oil, this fact should be considered in the rotation, of which the minimum limit of value should be placed at −18°.

E. Sachsse & Co. state that most of the pharmacopœias require a solubility of 1 : 5 in 70 per cent alcohol and they consider this a sufficiently fine test.—Chem. & Drug. 1910, v. 76, p. 491. Also Brit. & Col. Drug. 1910, v. 57, p. 241.

Hill and Umney, replying to criticisms, think it is not advisable to lower the optical rotation from −20° to −18° as suggested by Schimmel, nor to have an ester value of less than 5 per cent.—Pharm. J. 1910, v. 31 (85), p. 437.

Umney, John C., contributes a paper entitled "A Triangular Contest in Peppermint Oils," in which he gives tabulated results of the analysis of a number of oils from different sources.—*Ibid.* pp. 731–734.

Eldred, Frank R., reports that 42 lots of oil of peppermint were examined and found to vary in specific gravity at 15° from 0.900 to 0.909; optical rotation, from −19.4 to −28.8°; menthyl acetate, from 5.3 to 13.1 per cent; and total menthol, from 50.0 to 66.0 per cent. They were soluble in from 2 to 4 volumes of 70 per cent (by volume) alcohol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 895.

Pearson and Sechler report that 2 samples of oil of peppermint they have examined have failed to contain 6 per cent of ester, as required by the U. S. P., both contained about 4 per cent. In all other cases all of the requirements were met.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 143.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 56) report on 26 samples of oil of peppermint tested during the year.

Eliel, Leo, thinks that the oil of peppermint, if of U. S. P. quality, does not require a preservative as it really should improve by age.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1122.

Murayama, Y., presents a contribution to our knowledge of Japanese oil of peppermint and reports determining the constants of a terpin fraction boiling at from 170° to 172°, consisting largely if not entirely of *l*-limonen.—J. Pharm. Soc. Japan., 1910, pp. 141–144.

Thoms, H., reports experiments on the yield of oil from Japanese peppermint grown in Germany, also presents a table showing the physical and chemical properties of the oil compared with commercial, Japanese, oil of peppermint.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 424–431. See also Arb. pharm. Inst. Univ. Berl. (1910), 1911, v. 8, pp. 93–98.

Schimmel & Co. (Semi-Annual Report, October 1910, pp. 96–106) discuss the chemistry of Japanese oil of peppermint and report the finding of a new constituent, *Δ*-menthenone, a ketone which, so far, has not been found in essential oils.

Gilmour, D. (Brit. Dent. J.) states that oil of peppermint produces no irritation, inflammation, or discoloration. The only objection to its use on the teeth is its strong odor, which is very persistent and penetrating.—Pharm. J. 1910, v. 30 (84), p. 644.

OLEUM MENTHÆ VIRIDIS.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 131) present a review of the production of oil of spearmint during the past year.

Jeancard and Satie think that the analytical procedures of the Pharmacopœia for the oil of spearmint are inexact.—Pharm. Era, 1910, v. 43, p. 143.

Pearson and Sechler report that all of the samples of oil of spearmint they have examined have had specific gravities from 0.918 to 0.928. The U. S. P. limits might be made narrower.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 143.

An unsigned article (Chem. & Drug. 1910, v. 77, p. 687) calls attention to the wide latitude allowed by the Ph. Russ. in the specific gravity of oleum menthæ viridis, 0.900 to 0.940.

Hill and Umney suggest for the oil distilled from fresh flowering spearmint, *Mentha viridis* or *M. crispa:* Colorless or pale yellow or greenish yellow, becoming darker on keeping, having the characteristic odor and taste of the herb. Specific gravity at 15.5°, 0.925 to 0.940; optical rotation at 20°, −30° to −50°. Forms a clear solution with equal volumes of 80 per cent alcohol, the solution becoming turbid on further dilution. Soluble in 3 volumes of 90 per cent alcohol.—Pharm. J. 1910, v. 30, (84) p. 179. Also Chem. & Drug. 1910, v. 76, p. 272.

E. Sachsse & Co. think that an optical rotation of −30° to −55° would be more correct, as a great many pure American oils of spearmint rotate higher than −50°.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 137), in commenting on the proposed Ph. Brit. V requirements, state that the minimum limit of specific gravity at 15.5° should be 0.920. It is soluble up to 1 volume in 1.5 parts of 90 per cent alcohol.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 71) report on 2 samples of spearmint oil, English; specific gravity, 0.959 and 0.9593; optical rotation, −37.0° and −40.30°; soluble in 0.5 volume 90 per cent alcohol. These were genuine oils, although the specific gravity is outside the Ph. Brit. limits. Two samples of American oil had specific gravity 0.932 and 0.9358; optical rotation, −48.30° and −51.36°.

Eldred, Frank R., reports that four lots of oil of spearmint were found to vary in specific gravity at 15°, from 0.933 to 0.940; optical rotation, from −43.3° to −50.2°; and index of refraction, from 1.4880° to 1.4885°. They were soluble in an equal volume of 80 per cent (by volume) alcohol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 895.

OLEUM MORRHUÆ.

An editorial (Chem. & Drug. 1910, v. 76, p. 666) on cod fisheries and climatic conditions, states that hydrobiological investigations promise to forecast with reasonable certainty the success or otherwise of the Norwegian cod fisheries a year or even to some extent seven years in advance. Two curves are plotted showing the yield with reference to sea and air temperature, etc., for some years past.

An unsigned article (Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, p. 300) presents a table showing the production of cod liver oil in Lofoten.

An editorial (Brit. & Col. Drug. 1910, v. 58, p. 41) discusses the economic conditions of the cod liver oil market, and presents a table showing the number of millions of cod caught and the hectolitres of oil produced in Lofoten and in the whole country during the years of 1897 to 1910.

An unsigned article (Sc. Am. Suppl. 1910, v. 69, p. 29) discusses the Norwegian fishing industry and points out that the average catch for a period of forty-two years covered by statistical reports is 50,700,000 codfish per annum, and this figure was reached in 1909 for the first time since the year 1897.

The Canadian Druggist (1910, v. 22, p. 126) tells the story of Newfoundland's cod liver oil.

Dohme and Engelhardt state that in the Ph. Hung. III the specific gravity of cod liver oil is given as .920 to .930. The acid number should be less than 2, and the iodine number, for the determination of which 4 gm. are taken, should be between 150 and 155.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1188.

Moreau and Bietrix conclude that the turbidity which is seen in cod liver oil at low temperature is not an indication of sophistication.—Boll. chim. farm. 1910, v. 49, p. 137.

Lucas and Bird assert that cod liver oil will sometimes stand a temperature of $-5°$ for half an hour, and yet become quite turbid when kept for a night in a room in which the thermometer never falls below $+5°$; hence they believe it advisable to raise the time limit to three hours. They think the most reliable constant is that for unsaponifiable matter. In first class oils this rarely exceeds .75 per cent, but as no good purpose is served by making undue restrictions some little latitude is suggested as well as for free acid. They outline a proposed monograph for inclusion in the Ph. Brit.—Brit. & Col. Drug. 1910, v. 58, pp. 315, 316. See also Pharm. J. 1910, v. 31 (85), pp. 470, 471.

Rippetoe, John R., points out that, under iodine value, 0.3 gm. should be changed to 0.2 gm., since 25 cc. of the iodine mixture is not sufficient when 0.3 gm. of the oil is taken, and is apt to give results that are too low.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1062.

Eldred, Frank R., reports that forty-eight lots of cod liver oil have been found to vary in specific gravity at 15°, from 0.919 to 0.929; index of refraction at 20°, from 1.4775 to 1.4800; iodine value (Wijs), from 138.4 to 194.0. (Only five lots were found with iodine values below 150.) The saponification value varied from 178.0 to 191.7.—*Ibid.* p. 895.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 25) report that 20 samples of genuine oils (Norwegian and Newfoundland) were tested all varying within very narrow limits: specific gravity, 0.9255 to 0.9270; optical rotation, $+41°$ to $+43°$; refractive index (15°) 1.4805° to 1.4810°; saponification value 183.4 to 195; iodine value 160 to 173.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 8) report figures from the results of an analysis of the "A1" cod liver oil of their own manufacture.

Desesquelle (Rec. méd.) gives a very complete review of the whole subject of cod liver oil emulsions. Bull. Sc. pharmacol. 1910, v. 17, Annex, pp. 35–37.

Heiduschka and Rheinberger report observations on the fatty acids of cod liver oil.—Pharm. Zentralh. 1910, v. 51, pp. 203–204.

Williams, Owen, in a paper on cod liver oil, states that modern research into the chemistry of the oils of commerce has thrown more light on its value as a food.—Pharm. J. 1910, v. 31 (85), p. 525.

Bruder, O. E., expresses the belief that the medicinal value of cod liver oil is but slight and that all the therapeutic action that this oil possesses is due to its great value as a food. He thinks more attention should be given to some palatable form of cod liver oil.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 30.

Brady, William, says that cod liver oil, being digested in the duodenum, should follow the meal by 2 hours. The pure oil is preferable to the emulsion. Unless a patient takes from one to two ounces daily he wastes time.—N. York M. J. 1910, v. 91, p. 210.

Schabad, J. A. (Ztschr. f. klin. Med. v. 69, No. 5–6), reports favorable results in the treatment of rachitis by cod liver oil plus phosphorus, the latter greatly enhancing the action of the oil.—J. Am. M. Ass. 1910, v. 54, p. 828.

For additional references on the use of cod liver oil see J. Am. M. Ass., and Index Medicus.

OLEUM MYRISTICÆ.

Pearson and Sechler assert that the allowable range of specific gravity for nutmeg oil is certainly large enough to please any skilled sophisticator. The nine samples they have examined have varied in specific gravity from 0.884 to 0.909.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 143.

An unsigned article (Chem. & Drug. 1910, v. 77, p. 687) calls attention to the wide latitude allowed by the Ph. Russ. VI in the specific gravity of oleum myristicæ, 0.890 to 0.930.

Hill and Umney suggest: the oil distilled from nutmegs and subsequently rectified. Colorless or pale yellow, having the odor of nutmegs and a spicy taste. Specific gravity at 15.5°, 0.870 to 0.920; optical rotation at 20°, +13° to +30°; refractive index at 25°, 1.474° to 1.484°. Soluble in 3 volumes of 90 per cent alcohol. When evaporated on a water bath it should not leave a residue that crystallizes on cooling.—Pharm. J. 1910, v. 30 (84), p. 180. Also Chem. & Drug. 1910, v. 76, p. 272.

Brewis, Theo., finds that a good many oils leave some residue and he thinks it would be wise to put a limit of, say, 0.5 to 1 per cent, rather than to say that there should be no residue.—Pharm. J. 1910, v. 30 (84), p. 182.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 136), in commenting on the proposed Ph. Brit. V requirements for nutmeg oil, state that the maximum limit of specific gravity should be 0.930. Oils of their own distilling, from the best material, have given rotations as low as +7.52°.

Stafford Allen & Sons, Ltd., suggest that the evaporation test should read: When evaporated on a water bath it should not leave a residue that crystallizes on cooling, nor should it be greater than 1 per cent.—Chem. & Drug. 1910, v. 76, p. 372, and Pharm. J. 1910, v. 30 (84), p. 317.

Smith, J. Beddall, reports a sample which had an optical rotation of 34.75°.—Pharm. J. 1910, v. 30 (84), p. 226.

Hill & Umney, replying to Brewis's suggestion that a limit of residue should be stated rather than a residue that crystallizes, think that 5 per cent would be satisfactory. A specific gravity of 0.925 might be given as a maximum.—*Ibid.*, v. 31 (85), p. 437.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 80–82) report some additional investigations on the constituents of oil of nutmeg. They conclude that besides α-pinene, camphene and dipentene, the hydrocarbon fractions contain β-pinene and π-cymene, and that the unknown chief constituent of the alcohol fraction is δ-terpinenol-4.

Eldred, Frank R., reports that eleven lots of oil of myristica were found to vary in specific gravity at 15°, from 0.904 to 0.925; and optical rotation, from +17° to +20.3°. They were soluble in one to three volumes of 90 per cent (by volume) alcohol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 895.

OLEUM OLIVÆ.

McDonald, Merle, contributes a paper on olive oil, the method of making and the tests for identity and purity.—Proc. Nebraska Pharm. Ass. 1910, pp. 124–129.

Pease, A. V., describes a visit to the largest olive grove in the world and discusses the making of olive oil in Southern California.—*Ibid.* pp. 77–81. Also Western Druggist, 1910, v. 32, p. 609.

Mason, Silas C., reports observations on the drought resistance of the olive in the Southwestern States. Holm, Theo., adds a description with illustrations, of the anatomical structure of the olive (*Olea europea*).—Bull. No. 192, Bur. Plant Ind., U. S. Dept. Agric., 1911, pp. 60.

Goding, Frederic W., calls attention to the cultivation of the olive in Uruguay.—Am. Perf. 1910–11, v. 5, p. 75. Also Nat. Druggist, 1910, v. 40, p. 18.

Brodé, Julien, discusses the world's olive oil trade, giving the statistics of production and export, showing the advancing production, use and value of cotton seed oil and the effect of the passage of pure food laws upon both industries.—Cons. & Tr. Rep. Sept. 3, 1910, pp. 689–692.

Sasserath, Edw. A., presents some observations on Morocco olive oil.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 20, pp. 749–750.

Marcille, R., reports on the composition of the olive oil of Tunis.—Ann. Falsif. 1910, v. 3, pp. 372–379.

Smith, James A., reports on the olive oil outlook in Mediterranean countries, and presents a table giving the crop outlook in the several departments of Italy for the year 1910–11, as compared with the average yield for the 5 year period from 1901 to 1906.—Am. Perf. 1910–11, v. 5, p. 246.

Gehe & Co. (Handels-Bericht 1910, p. 83) point out that the season 1908–9 is to be counted among the poorest so far as the product olive oil is concerned.

Lucas and Bird state that olive oil containing 3 per cent of free acid is not very unpleasant and that for medicinal use good oleic acid is just as valuable in a liniment as the best olive oil; in fact, it penetrates much better. They outline a proposed monograph for inclusion in the Ph. Brit. with tests for the detection of sesame oil.—Brit. & Col. Drug. 1910, v. 58, pp. 315, 316. Also Pharm. J. 1910, v. 31 (85), pp. 470, 471.

An editorial (Chem. & Drug. 1910, v. 77, p. 588), referring to the recommendations of Lucas and Bird, calls attention to the difficulty of framing a monograph for olive oil which will withstand the exigencies of the courts.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, pp. 12–15) endorse the proposition made by Bird and Lucas to introduce, as an official test, the coloration produced by shaking with an equal volume of nitric acid (specific gravity 1.375).

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 52) report that samples of olive oils from 125 consignments of varying grades were tested during the year. The oils suitable for pharmaceutical purposes had figures within the following limits: specific gravity, 0.915 to 0.918; refractive figure, —1.5° to +2.5°; free acid (oleic), 0.7 to 2.8 per cent; iodine value (Wijs), 79 to 90.5.

Eldred, Frank R., reports that twenty-four lots of olive oil were found to vary in specific gravity at 15°, from 0.915 to 0.918; index of refraction at 20°, from 1.4683 to 1.4693 (Two lots were found having refractive indices at 20° of 1.4706 and 1.4708); iodine value (Wijs), from 78.8 to 86.5; and saponification value, from 185.3 to 195.4.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 895.

Cowie, W. B., presents a note on olive oil with tabulated results of the analysis of a number of samples.—Pharm. J. 1910, v. 31 (85), p. 794.

McDonald, Merle, discusses the nature of olive oil and calls attention to some of its most common adulterants.—Western Druggist, 1910, v. 32, pp. 616–617.

Zampolli, Lino Metello, makes a comparison of the various processes for the recognition of foreign oils in olive oil. He concludes that no single process or color reaction is in itself sufficient.—Boll. chim. farm. 1910, v. 49, p. 9.

Riedel's Berichte (1910, p. xxix) suggests that for the elaidin test the nitric acid should have added to it a trace of copper or of mercury; also suggests that for the estimation of the iodine number only 0.1 to 0.2 of oil be used.

An editorial (Chem. & Drug. 1910, v. 76, p. 777) notes that at present only two pharmacopœias, Dutch and French, contain a special test for the presence of arachis oil.

Marcille, R., reports observations on the detection of cotton seed oil in olive oil.—Ann. Falsif. 1910, v. 3, pp. 235–238.

Tortelli and Fortini discuss the determination of beet oil in mixtures with olive oil and other food oils.—Chem. Ztg. 1910, v. 34, pp. 689–690.

Bohrisch, P., discusses the detection of peanut oil in olive oil.—Pharm. Zentralh. 1910, v. 51, pp. 361–364, 393–397, 423–427, 450–454.

Hackman, Charles A., presents a paper on the examination of olive oil for the presence of arachis oil.—Chem. & Drug. 1910, v. 76, p. 329.

An editorial (Pharm. J. 1910, v. 31 (85), p. 489) states that it would be difficult to suggest a satisfactory reason why arachis oil should not be given as an official substitute for olive oil, in the case of preparations in which the latter oil is at present solely employed.

Hudson, T. G., reports the ruling that when sweet oil is dispensed it shall be olive oil. An examination of 53 samples shows that 40 were in whole or in part composed of cotton seed oil and therefore misbranded.—Bull. Georgia Dept. Agric. 1910, v. 51, pp. 147–154.

Kahn, Joseph, discusses the testing of olive oil, and points out that cotton seed oil at the present time is usually sold under the designation salad oil.—D.-A. Apoth. Ztg. 1910–11, v. 31, p. 57.

The Committee on Adulterations states that substitutes for olive oil are now labeled ''salad oil'' and points out that the terms ''olive oil'' and ''salad oil'' are synonymous with most people. As the U. S. P. does not mention salad oil, cotton seed oil is largely dispensed when salad oil is asked for.—Proc. New York Pharm. Ass. 1910, p. 168.

An editorial (Am. Perf. 1910–11, v. 5, p. 154) points out that in accordance with notices of judgments, published by the Department of Agriculture, salad oil means olive oil.

Gane, E. H., says that green olive oil is frequently a very inferior quality, at times containing over 40 per cent of free fatty acid calculated as oleic.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 745.

Cutler, William P., reports 10 per cent of the olive oils examined as illegal.—Ann. Rep. Food & Dairy Com. Missouri, 1910, p. 42.

Notices of Judgments No. 217, 244, 247, 340, 386, 397, 417, 447 relate to adulteration and misbranding of olive oil.

Table showing some of the analytical results reported for olive oil.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Sayre, L. E	4	3	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.
Sayre, L. E	14	3	*Ibid.* p. 1098.
Patch, Edgar L	1	1	*Ibid.* p. 745.
Jaffa, M. E	1	1	Bull. California Bd. Health, 1910, v. 5, p. 199.
Hill, Edward C	2	2	Bull. Colorado Bd. Health, 1910, v. 10, No. 1, p. 10.
Hudson, T. G	57	5	Bull. Georgia Dept. Agric. 1910, No. 51, pp. 167–172.
Sayre, L. E	23	6	Bull. Kansas Bd. Health, 1910, v. 6, p. 37.
Lythgoe, Hermann C	148	41	Rep. Massachusetts Bd. Health, 1910, p. 357.
Halverson, J. O	8	0	Bull. Dept. Food & Drug. Inspec. Missouri, 1910, v. 2, No. 10, 11, p. 3.
Howard, C. G	16	3	New Hampshire San. Bull. 1910, v. 3, pp. 161 180.
Pearson, W. A	2	2	Proc. Pennsylvania Pharm. Ass. p. 140.
The Local Government Board	309	11	Pharm. J. 1910, v. 30 (84), p. 33.

Claypool, Vance and others, studying the prevention of adhesions, conclude that (1) olive oil does seem to prevent the formation of adhesions in dogs and is worthy of a thorough trial in human surgery; (2) liquid petrolatum has but slight value for such a purpose.—J. Am. M. Ass. 1910, v. 55, p. 312.

Brady, William, notes that olive oil should be given apart from meals as, according to Pawlow, oil markedly inhibits gastric digestion.—N. York M. J. 1910, v. 91, p. 210.

An unsigned abstract (Envoy) states that some one asserts that hot olive oil applied will take away the black from a black eye, and presumably from other black and blue spots.—J. Am. Inst. Homœop. 1910, v. 2, p. 251.

OLEUM PICIS LIQUIDÆ.

Gane, E. H., says that oil of tar meeting U. S. P. requirements is not obtainable. A more accurate definition of just what is intended by the official description of oil of tar is required. All sorts of products are sold as oil of tar. He reports the examination of 9 samples, the color ranged from light-brown to black; specific gravity, from 0.861 to 1.044.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 746.

Rippetoe, John R., thinks the specific gravity for oil of tar is too low and reports on six samples which were claimed by the distillers to be the best they could produce. They varied in specific gravity from 0.9574 to 1.0340.—*Ibid.* pp. 1062–1063.

Pharm. J. (1910, v. 31 (85), p. 591) reports the death of an infant 13 weeks old, whose "comforter" had been dipped into oil of tar, instead of essence of aniseed.

OLEUM PIMENTÆ.

Pearson and Sechler assert that all of the samples of pimenta oil have been of U. S. P. quality, except 1, which had a specific gravity of 1.052.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 143.

Eldred, Frank R., reports that fifteen lots of oil of pimenta were found to vary in specific gravity at 15° from 1.034 to 1.046; optical rotation, from −0.4° to −3.0°; and eugenol content, from 70 to 80 per cent. They were soluble in from 1 to 2.5 volumes of 70 per cent (by volume) alcohol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 896.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 59) report that 2 somewhat abnormal samples of pimenta oil had specific gravity 1.025 and 1.027; optical rotation, −5.30° and −5°; eugenol, 76 per cent for each.

Hill and Umney suggest for the oil distilled from pimenta: Yellow or reddish yellow when recently distilled, becoming darker on keeping. It has the characteristic odor of pimenta and a pungent spicy taste. Specific gravity at 15.5°, 1.040 to 1.055; optical rotation at 20°, 0 to −4°; refractive index at 25°, 1.508 to 1.535. Soluble in 3 volumes of 70 per cent alcohol. It should contain not less than 65 per cent of eugenol when tested as described under oleum caryophylli.—Pharm. J. 1910, v. 30 (84), p. 180. Also Chem. & Drug. 1910, v. 76, p. 272.

Evans Sons Lescher & Webb state that in their experience the specific gravity of this oil does not rise above 1.050.—Chem. & Drug. 1910, v. 76, p. 341.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 136), in commenting on the proposed Ph. Brit. V requirements for oil of pimenta, state that the minimum limit for specific gravity of this oil should be 1.024. The rotation may go to −5°. For the test of eugenol content a 5 per cent solution is prescribed, which, however, gives much too high results with pimenta oil. For this reason they recommend the use of a 3 per cent solution.

E. Sachsse & Co. have found pure oils of their own distilling which are soluble in 1:3 of 70 per cent alcohol, but give a cloudy solution if more 70 per cent alcohol be added.—Chem. & Drug. 1910, v. 76, p. 491. Also Brit. & Col. Drug. 1910, v. 57, p. 241.

W. J. Bush & Co., Ltd., do not find that their pimenta oil generally ranges so high as in the characters suggested.—Chem. & Drug. 1910, v. 76, p. 719.

Henderson, H. John, points out that the introduction of a quantitative test for eugenol in oil of pimenta, can not prevent the fortifying of an oil and this does not encourage the production of a genuine oil.—Year-Book of Pharmacy, 1910, p. 390. Also Pharm. J. 1910, v. 31 (85), p. 140.

Stafford Allen & Sons, Ltd., assert that the most delicate flavored oils are outside the barriers of the pharmacopœia, but the way inside is only too easy and obvious. The specific gravity and eugenol content appear to be too high for some genuine oils.—Chem. & Drug. 1910, v. 76, p. 372. Also Pharm. J. 1910, v. 30 (84), p. 317.

Hill and Umney, replying to criticisms with regard to oleum pimentæ, state that a specific gravity of 1.030 to 1.050 is a suitable range, and a percentage of 60 of eugenol as a minimum is high enough.—Pharm. J. 1910, v. 31 (85), p. 437.

OIL OF PINE NEEDLE.

Dohme and Engelhardt state that it is interesting to note that oil of pine, used considerably for inhaling purposes, is official in the Ph. Hung. III. The specific gravity is given as .853 to .870. It should be perfectly soluble in ether and in twice its volume of alcohol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1188.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 127), in commenting on the Ph. Hung. III requirements for pine needle oil point out that oleum pini silvestris is an old but incorrect designation for oil from cones of *Abies alba*, which is, in fact that oil intended in this Pharmacopœia, as is evident from the specific gravity mentioned. Genuine pine needle oil, i. e., the oil distilled from the needles of *Pinus silvestris* L. is not a commercial product at all.

Noyes, Reinold, says that the market shows now few products which were described in the publications of ten years ago, and the name pinus sylvestris is more misused than any other, as there is practically no oil of *Pinus sylvestris* on the market. The name is generally applied to oils, such as Siberian and Austrian oils, which latter, so far as he can tell, are equally serviceable for the uses to which this oil is put.—Proc. Minnesota Pharm. Ass. 1910, p. 74.

Hill and Umney, in their proposed monograph for oil of pine give the following requirements: The oil distilled from the fresh leaves of *Pinus sibirica*. Colorless, or nearly so. Specific gravity, 0.900 to 0.920; optical rotation, $-32°$ to $-42°$; index of refraction, about 1.474. It should contain 30 to 40 per cent of esters, calculated as bornyl acetate, as determined by saponification with alcoholic potash. The substitution of this oil for that of *Pinus pumilio* is suggested.—Pharm. J. 1910, v. 30 (84), p. 177.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 138), in commenting on the Ph. Brit. V proposed requirements for Siberian pine needle oil, point out that the specific gravity at 15° should range from 0.905 to 0.924; the optical rotation from $-37°$ to $-43°$. The minimum ester content (calculated as bornyl acetate) should be 29 per cent.

Evans Sons Lescher & Webb (Analytical Notes, 1910, pp. 59-60) report that *P. sibirica* is now recommended as the most reliable and constant source for the medicinal oil.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 23) report that samples of oil of *P. sibirica* have given decidedly lower figures for ester content that they have usually obtained.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 91-92) call attention to some of the recent work done in connection with pine needle oils and present a table giving the results obtained by Tröger and Beutin on an oil from *P. silvestris* L.

OLEUM RICINI.

Lucas and Bird assert that genuine cold pressed castor oil from fresh seed is very different from even the best medicinal oil. This oil is not, however, obtainable commercially, although there is no reason why it should not be so. Fashion demands a bleached oil, hence we have the anomaly of a small quantity of acid, nauseous oil especially manufactured for medicinal use, while thousands of tons of infinitely sweeter but darker colored oil are used for lubricating and other purposes. They outline a monograph with tests for inclusion in the Ph. Brit.—Brit. & Col. Drug. 1910, v. 58, pp. 315, 316. Also Pharm. J. 1910, v. 31 (85), pp. 470, 472.

Hill, Charles Alex., for the iodine value of castor oil, proposes 83 to 90, in place of 83 to 89. The acetyl value is a valuable factor, and might usefully be included, 148 to 150.—Pharm. J. 1910, v. 31 (85), p. 781.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 20) report that 80 samples of castor oil of varying grades were examined, and the medicinal oils in all cases fell within the limits suggested for the new Ph. Brit.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 7) report that numerous samples of castor oil have been examined, the results indicating complete absence of sophistication. The specific gravity ranged from 0.962 to 0.965; saponification value, 179.6 to 181.69.

Eldred, Frank R., reports that fourteen lots of castor oil varied in specific gravity at 15°, from 0.960 to 0.967; index of refraction, from 1.4780 to 1.4802; iodine value (Wijs), from 82.0 to 86.9; and saponification value, from 176.4 to 180.9.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 896.

Sayre, L. E., reports on 2 samples of castor oil: 1 passed; 1 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1096.

Hankey, William T., thinks it would be preferable if the formula for emulsion of castor oil were adjusted to the continental proportions.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 106.

Nitardy, F. W., presents a formula for aromatic castor oil, using oil of anise as the flavoring and saccharin as the sweetening agent.—*Ibid.* p. 96.

Wätzold, G. A. (Deut. med. Wchnschr. 1910, v. 36, No. 36), comments on the extensive use of the castor oil plant in ancient Egyptian medicine (1500 B. C.).—J. Am. M. Ass. 1910, v. 55, p. 1418.

Tyrode, Maurice Vejux, quotes Magnus to the effect that, when fresh, castor oil does not hasten the emptying of the stomach, but increases the pendulum movements and peristalsis of the small intestines.—Boston M. & S. J. 1910, v. 162, p. 176.

Brady, William, notes that castor oil acts in 4 or 5 hours. This cathartic ought not to be given at bed time, lest it disturb the night's rest.—N. York M. J. 1910, v. 91, p. 212.

Rothmann, M., discusses the usefulness and danger of castor oil as a purgative in cases of phosphorus poisoning.—Therap. Monatsh. 1910, v. 24, pp. 616–619.

An editorial (N. York M. J. 1910, v. 91, p. 758) calls attention to the work of Boynton W. McFarland (Yale M. J.) on the poison of the castor oil bean.

Chambers, Frank, reports a number of cases of castor oil poisoning in cattle.—Vet. J. Lond. 1910, v. 17, pp. 717–719.

OLEUM ROSÆ.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 92–93) discuss the economic condition of the oil of rose market and point out the need for determining the specific gravity of the oil before and after extracting it with water to detect the possible addition of alcohol.

An unsigned note (Chem. & Drug. 1910, v. 77, p. 490) illustrates some of the modern apparatus recently installed by Shipkoff & Co. of Kazanlik, for the distillation of otto of rose.

Parry, Ernest J., contributes a note on a new adulterant found in Bulgarian otto of rose, with figures of recent analyses.—Chem. & Drug. 1910, v. 77, p. 261. Also Am. Perf. 1910–11, v. 5, pp. 178–179.

Noyes, Reinold, calls attention to the different substitutes for the oil of rose and states that the principal market is for the imitation which is simply a mixture of the rose oils and certain fragrant wood oils.—Proc. Minnesota Pharm. Ass. 1910, p. 77.

Schimmel & Co. (Semi-Annual Report, October 1910, pp. 108–111) discuss the production of oil of rose in Bulgaria and present a table giving a detailed account of the product in different districts.

See also Heinrich Haensel, Bericht, April–September, 1910, pp. 46–47.

An editorial (Am. Perf., 1910–11, v. 5, p. 132) discusses the disquieting reports that have been received from Bulgaria regarding the comparative paucity of this year's yield of otto of rose.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 145), commenting on the requirements proposed by the Second International Congress of the White Cross for oil of rose, point out that at 30° (calculated for water at 15°) the limits of specific gravity value observed by them ranged from 0.849 to 0.862.

Eldred, Frank R., reports that six lots of oil of rose were found to vary in specific gravity at 30° from 0.856 to 0.859; optical rotation, from −1.3° to −2.7°; index of refraction at 20°, from 1.4610 to 1.4665; congealing point, from 19° to 21°; and saponification value, 11.9 to 17.1. The saponification values for thirty-four lots varied from 11.9 to 22.2, and the optical rotation from −1.3° to −3.6°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 896.

Pearson and Sechler report that claims are made that the specific gravity of oil of rose is too low.—Merck's Rep. 1910, v. 19, p. 45.

Jeancard and Satie call attention to the difference in the properties of French and of Bulgarian oil of rose and present a table showing these variations.—Am. Druggist 1910, v. 56, p. 43. Also Pharm. Era, 1910, v. 43, p. 143.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 127), in commenting on the Ph. Hung. III requirements for oil of rose, point out that the imperfect solubility in alcohol is due to the high paraffin content of the oil.

Hill and Umney suggest as a synonym, Otto of Rose and outline the following requirements for the oil distilled from the fresh flowers of *Rosa damascena:* A pale yellow or yellowish green crystalline mass, semi-solid at ordinary temperatures, with a strong fragrant odor of rose, and a sweetish taste. Specific gravity at 30° (compared with water at 15.5°), 0.855 to 0.862; optical rotation at 20°, −2° to −4°; refractive index at 25°, 1.456 to 1.465; melting point at 20°, to 22.5°.—Pharm. J. 1910, v. 30 (84), p. 180. Also Chem. & Drug. 1910, v. 76, p. 273.

Simmons, Wm. H., objects most strongly to a minimum specific gravity 30°/15° of 0.855, as in some seasons many of the oils do not reach this figure, but lie between 0.850 and 0.854.—Chem. & Drug. 1910, v. 76, p. 304.

Heine & Co. suggest that the minimum limit of specific gravity at 30° should be from 0.849 to 0.862.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Parry, E. J., considers the minimum refractive index, given at 20° as 1.456, too low.—Pharm. J. 1910, v. 30 (84), p. 181.

Evans Sons Lescher & Webb assert that a specific gravity of 0.853 to 0.862 and refractive index of 1.458 to 1.466 are the widest legitimate variations for authentic oils.—Chem. & Drug. 1910, v. 76, p. 341.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 137), in commenting on the proposed Ph. Brit. V requirements for rose oil, state that the minimum limit for specific gravity at 30° should be 0.849. According to their observations, the rotation ranges from −1.30° to 3°.

Naumann, W., fails to see why a lower limit of 0.855 is placed. In 1905 and 1906 many of the finest oils tested 0.853 to 0.854, and they have been known to go two or three points lower.—Chem. & Drug. 1910, v. 76, p. 341.

Sachsse & Co. "agree to the letter" with the above.—*Ibid.* p. 491.

Hill and Umney, replying to criticisms, state with regard to oleum rosæ that the specific gravity might be lowered to 0.854, at 30°.—Pharm. J. 1910, v. 31 (85), p. 437.

Evans Sons Lescher & Webb (Analytical Notes, 1910, pp. 62–63) present the constants of genuine oils from this year's crop, and contrast them with the standards proposed for inclusion in the Ph. Brit.

OLEUM ROSMARINI.

Fichtenholz, A., quotes Tschirch as authority for the derivation of rosemary from *rops*, meaning a low bush, and *muron*, balsam.—J. pharm. et. chim. 1910, v. 2, p. ii.

Delpy, Hedwig, reports a study of the history, botanical characteristics and chemical composition of rosemary.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, p. 249.

LaWall and Bradshaw report finding 5.1 per cent ash in rosemary herb.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Noyes, Reinold, says that owing to the crude methods of distillation and the ingrained habit in Dalmatia of adulterating the oil of turpentine, the Trieste oil of rosemary is not nearly so fine in odor as the French and the borneol content is always low.—Proc. Minnesota Pharm. Ass. 1910, p. 76.

Jeancard and Satie think that, instead of speaking of the content of acetate of bornyl and of borneol, it would have been preferable to give the indices of saponification.—Pharm. Era, 1910, v. 43, p. 143. Also Am. Druggist, 1910, v. 56, p. 43.

Pearson and Sechler report that samples of oil of rosemary that they have examined have had specific gravities from 0.899 to 0.911, except two samples, which were rejected on account of having specific gravities of 0.869 and 0.877.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 143.

Eldred, Frank R., reports that thirteen lots of oil of rosemary were found to vary in specific gravity at 15° from 0.900 to 0.913; and optical rotation, from +1.3 to +14.2°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 896.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 131), reviewing the Ph. Ital. III requirements for rosemary oil, state that rosemary oil is soluble in one-half its volume of 90 per cent alcohol.

They also (*Ibid.* April 1910, p. 145), comment on the requirements proposed by the Second International Congress of the White Cross for oil of rosemary.

Hill and Umney suggest for the oil distilled from the flowering tops of *Rosmarinus officinalis:* Colorless or pale yellow, with the characteristic odor of rosemary and a warm camphoraceous taste. Specific gravity at 15.5°, 0.900 to 0.920; optical rotation, 0 to +15°; refractive index at 25°, 1.463 to 1.473. Soluble in 1 volume of 90 per cent alcohol and in 5 to 10 volumes of 80 per cent alcohol. It should contain not less than 10 per cent of total alcohols, calculated as borneol, as determined by the acetylation process, and at least 2 per cent of esters, calculated as bornyl acetate as determined by the saponification process.—Pharm. J. 1910, v. 30 (84), p. 180. Also Chem. & Drug. 1910, v. 76, p. 273.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 137), in commenting on the proposed Ph. Brit. V requirements for rosemary oil, state that French rosemary oil sometimes gives slightly cloudy solutions with 80 per cent alcohol. The bornyl acetate content should be reduced to 1 per cent.

Henderson, H. John, thinks that the English oil of rosemary is greatly superior to the foreign oil in aroma.—Year-Book of Pharmacy, 1910, pp. 390–391. See also Pharm. J. 1910, v. 31 (85), p. 140, 541.

Naumann, W., asserts that many pure oils have a lower gravity than 0.900 and 0.895 or 0.897 should be allowed.—Chem. & Drug. 1910, v. 76, p. 341.

Hill and Umney, replying to criticisms state, with regard to oleum rosmarini, that the lower limit of specific gravity might, perhaps, be 0.895, though, as a rule, oils are over 0.903. To include all English and Spanish oils, the rotation might be made from −2° to +15°. A minimum of 1.8 per cent of esters is desirable.—Pharm. J. 1910, v. 31 (85), p. 437.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 63) report that 1 genuine sample of English oil of rosemary, although completely soluble in half its volume of 90 per cent alcohol, gave a turbid solution with 10 volumes, the other figures being normal.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 24) report that they have again had occasion to object to a specimen of oil of rosemary with low specific gravity and lævo-rotation. The actual figures were: specific gravity, 0.886; optical rotation, −2.29°.

Parry, Ernest J., proposes the following standard for pure oil of rosemary: Specific gravity, 0.895 to 0.920; optical rotation, −9° to +18°; refractive index at 20°, about 1.4670–1.4690; esters as bornyl acetate not below 2.5 per cent; total borneol not below 10 per cent.—Am. Perf. 1910–11, v. 5, pp. 134–135.

OLEUM SABINÆ.

Noyes, Reinold, asserts that oil of savin has been from time immemorial adulterated with turpentine, generally to the tune of about 50 per cent. This adulterated oil is now sold as a compound, sometimes called French. It is generally half strength but it is more than half the price of the genuine.—Proc. Minnesota Pharm. Ass. 1910, p. 75.

Pearson and Sechler report that the samples of oil of savin they have examined fulfilled the U. S. P. requirements.—Merck's Rep. 1910, v. 19, p. 45.

Eldred, Frank R., reports that twenty-one lots of oil of savin were found to vary in specific gravity at 15° from 0.906 to 0.925; and optical rotation, from +39° to +56.3°. They were soluble in 0.5 to 1 volume of 90 per cent (by volume) alcohol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 896.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 24) report that the following figures obtained for typical English and foreign oil of savin show a very considerable difference in composition. They are assured of the purity of the latter. Specific gravity of the English oil was 0.9275, of the foreign, 0.9150; optical rotation of English oil, +46.9; foreign, +52.°; distillate below 200° of English, 19 per cent; foreign, 52 per cent; saponification value of English, 125.8.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 66) report that a sample of English oil of savin, undoubtedly genuine, had a specific gravity of 0.9507; optical rotation, +42.6°; and was soluble in 0.5 volume of 90 per cent alcohol. An adulterated sample of foreign oil had a specific gravity 0.888; optical rotation, +68.52°, soluble only with turbidity in 90 per cent alcohol. It consisted of an admixture of turpentine and an unknown substance.

OLEUM SANTALI.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 94–98) discuss the economic conditions of the sandalwood oil market and present tables showing the comparative prices obtained in the sandalwood auctions of 1908 and 1909.

Noyes, Reinold, reports that the best grades of santal oil are distilled in Europe and America from wood imported from the East Indies. On account of the high price of this oil, there have always been substitutes for it, of which the best is the oil from *Amris balsamifera*, known as West Indian sandalwood, which sells for about half the price of the former and contains sometimes as much as 50 per cent of santalol.—Proc. Minnesota Pharm. Ass. 1910, p. 72.

Tunmann, O., states that the wood of *Santalum album* L. is being imported in large quantities from India. Other more or less similar woods come from New Caledonia and from the Sandwich Islands. He presents a table showing the origin of the drug as imported into Hamburg in 1907 and 1908.—Apoth. Ztg. 1910, v. 25, pp. 556–557.

Schimmel & Co. (Semi-Annual Report, October 1910, pp. 113–130) present an account of the production of oil of sandalwood in Southern English India. Also discuss the composition and chemistry of oil of sandalwood.

Heinrich Haensel (Bericht, April–September 1910, p. 47) reports the amount of sandalwood offered at auction during the past year.

Roure-Bertrand Fils (Sc. & Ind. Bull., April 1910, p. 75) report that nearly 1000 tons of new Caledonian sandalwood consigned from Nouméa to Marseilles were received in the course of last year. The essential oil obtained from this wood is not so pleasant in its odor, but it contains the quantities of santalol prescribed by the Pharmacopœia.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 132), reviewing the Ph. Ital. III requirements for sandalwood oil, point out that the requirement, that this oil have a santalol ($C_{15}H_{24}O$) content of 77 to 84 per cent, is an inaccurate statement, nor does it agree with the Pharmacopœia requirements as to the mode of determination. The latter rather show that a santalol content of at least 90.27 per cent is demanded.

Pearson and Sechler report that the constants of oil of sandalwood have been so carefully discussed by Dohme and Engelhardt and others that a reference is only necessary to their excellent work.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 143.

Riedel's Berichte (1910, p. xxix) suggests the determination of the optical activity and the determination of santalol in connection with oil of sandalwood.

Hill and Umney suggest for the oil distilled from *Santalum album:* Pale yellow in color or nearly colorless, somewhat viscid in consistence, having an aromatic odor and an unpleasant nauseous taste. Specific gravity at 15.5°, 0.973 to 0.985; optical rotation at 20°, $-16°$ to $-20°$; refractive index at 25°, 1.498 to 1.508. Soluble in 6 volumes of 70 per cent alcohol at 20°. Should contain not less than 90 per cent of total alcohols, calculated as santalol $C_{15}H_{24}O$, when determined by the acetylation process.—Pharm. J. 1910, v. 30 (84), p. 180. Also Chem. & Drug. 1910, v. 76, p. 273.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 137), in commenting on the proposed Ph. Brit. V requirements for oil of sandalwood, state that they recommend $-21°$ as the maximum limit for optical rotation.

Heine & Co. suggest the addition of the requirement that the oil of sandalwood dissolve in 5 volumes of 70 per cent alcohol, and remain clear on further addition of alcohol of the same strength.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Stafford Allen & Sons, Ltd., suggest that the limits in the Ph. Brit. IV be retained and 15.5° be stipulated for determination of solubility.—Chem. & Drug. 1910, v. 76, p. 372.

Allen, E. Watlock, suggests that the solubility be taken at 15°. Total alcohols as santalol not less than 90 per cent.—Pharm. J. 1910, v. 30 (84), p. 317.

Harvey and Wilkie note that, as already pointed out, perfectly genuine oils may have rotations as low as −13.32°. Speaking only of well authenticated oils, a requirement of anything more than 90 per cent of santalol would probably prove ineffective.—Chem. & Drug. 1910, v. 76, p. 421.

Hill and Umney, replying to criticisms, suggest that a rotation of −13° to −21° would probably cover all views for oleum santali. The raising of the santalol content to 92 per cent is not advised.—Pharm. J. 1910, v. 31 (85), p. 437.

The Chemist and Druggist (1910, v. 76, p. 293) publishes a large number of determinations, from the laboratory records of Stafford Allen & Sons, Ltd., of the specific gravity, solubility in 70 per cent alcohol at 15°, and optical rotation in 100 mm. tube, of oils distilled from Mysore sandal wood. See also *Ibid.* p. 372.

Leubner, Bernard O., discusses the testing of oils of sandalwood and reports the examination of some 30 samples. He finds the average optical rotation to be about −15°, only one being below −10°, and none were over the limit of −20.—Merck's Rep. 1910, v. 19, p. 64.

An unsigned note (Chem. & Drug. 1910, v. 77, p. 762) gives the results of analyses of 10 samples each of sandalwood oil and sandalwood oil capsules.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 24) report that out of the numerous samples of oil of sandalwood examined they found 2 or 3 to give rotations slightly lower than 16°, although the oils were perfectly normal in other respects: specific gravity, 0.975 to 0.982; optical rotation, −15.40° to −16.5°; alcohols as santalol, 93.08 to 98.02 per cent. All were soluble in 6 volumes of 80 per cent alcohol at 20°.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 65) report that samples of oil of sandalwood of their own distillation from East Indian wood varied in specific gravity from 0.9743 to 0.9782; optical rotation, −16.42° to −20.0°; total santalol, 91.8 to 98.8 per cent; santalyl acetate, 3.3 to 5.8 per cent. The oils were soluble in 3.5 to 8 volumes of 70 per cent alcohol at 20°.

Franz Fritzsche & Co. assert that the lævogyric action of sandal wood oil has nothing to do with its therapeutic value, and no satisfactory conclusions can be inferred from this factor.—Chem. & Drug. 1910, v. 76, p. 372.

A book review (Chem. & Drug. 1910, v. 77, p. 518) quoting from the second edition of Gildemeister and Hoffmann, notes that sandalwood was used as a perfume in ancient times, it having been well known to the Egyptians at least 3,600 years ago. The distillation of the oil appears to have been mentioned by Saladin in 1488, and it is recorded that even as early as the ninth century the distilled oil was used in Ceylon for embalming the bodies of princes.

Lenz, W., reports on an adulterant of African sandalwood oil; also reviews the properties of the latter oil.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 351–358. Also Arb. pharm. Inst. Univ. Berl. (1910), 1911, v. 8, pp. 62–67.

Jordan, Anson, in a study on the action of urinary antiseptics, reports observations on the antiseptic effect of sandalwood oil. He concludes that the antiseptic action of sandalwood oil in the urine was found to be quite feeble against putrefactive organisms or the *B. coli*, but it showed a marked selective action upon *Staphylococcus*, against which it has quite a specific antiseptic power.—Biochem. J. 1910, v. 5, pp. 285–287.

OLEUM SASSAFRAS.

Rabak, Frank, states that oil of sassafras was one of the first volatile oils distilled in the United States. The production of this oil attained commercial significance early in the last century and it is distilled extensively at present in Kentucky, Tennessee, Pennsylvania, Maryland, and Virginia.—Bull. No. 195, Bur. Plant Ind., U. S. Dept. Agric., 1910, p. 37.

Noyes, Reinold, considers the artificial oil of sassafras, which is the fraction of the oil of camphor containing safrol in the same proportions as natural oil does, a better substitute for the true oil than the pure safrol.—Proc. Minnesota Pharm. Ass. 1910, p. 75.

Pearson and Sechler report that the fraction of oil of camphor known as light oil, and having a specific gravity from 0.865 to 0.890 is sold at about 15 to 18 cents a pound. It has the desired sassafras odor, and may be mixed with synthetic safrol, which has a higher specific gravity than true oil, in such proportion that the admixture will have the same specific gravity as a genuine oil. An accurate test to detect this sophistication is greatly desired.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 143.

Eldred, Frank R., reports that fourteen lots of oil of sassafras were found to vary in specific gravity at 15° from 1.07 to 1.08, and optical rotation from +2.6° to +3.9°. They were soluble in 1 to 2 volumes of 90 per cent (by volume) alcohol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 896.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 24) report that the specific gravity for 7 samples of oil of sassafras ranged from 1.074 to 1.080. Two oils examined for rotatory power each gave +2.90°.

Beilstein, Christian, asserts that oil of sassafras is being adulterated to a considerable extent with the artificial article.—Proc. N. W. D. A. 1910, p. 98.

Hill, Edward C., reports one sample of oil of sassafras synthetic which was found to be misbranded.—Bull. Colorado Bd. Health, 1910, v. 10, No. 1, p. 10.

Sayre, L. E., reports on 3 samples of oil of sassafras: all passed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.

OLEUM SINAPIS VOLATILE.

Heine & Co. recommend admitting the artificial oil of mustard in the Pharmacopœia as it is impossible to prevent adulteration of the natural product with it or to detect it either chemically or physically.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Noyes, Reinold, thinks it idealism pure and simple that leads some to prefer the natural mustard oils to the synthetic.—Proc. Minnesota Pharm. Ass. 1910, p. 79.

Pearson and Sechler think an accurate test is desirable to differentiate volatile oil of mustard from the synthetic allylisothiocyanate.—Merck's Rep. 1910, v. 19, p. 45. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 143.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 126), in commenting on the Ph. Hung. III requirements for mustard oil, point out that the minimum limit of specific gravity should be 1.014 and that the greater part of mustard oil boils between 148° and 153° if the mercury thread of the thermometer is wholly surrounded by the steam.

Dohme and Engelhardt state that no assay process is given in the Ph. Hung. III for the volatile oil of mustard.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1188.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 131) review the Ph. Ital. III requirements for oil of mustard.

They also (*Ibid.* p. 143) comment on the requirements proposed by the Second International Congress of the White Cross for oil of mustard.

Hill and Umney suggest for the oil obtained by distillation from black mustard seeds deprived of fixed oils and macerated in water for several hours: Specific gravity at 15.5°, 1.018 to 1.025; distills between 148° to 156°. Should contain not less than 92 per cent of allylisothiocyanate; determined by a process outlined.—Pharm. J. 1910, v. 30 (84), p. 180. Also Chem. & Drug. 1910, v. 76, p. 273.

E. Sachsse & Co. propose to substitute the artificial for the genuine oil, unless differences between the two can be found.—Brit. & Col. Drug. 1910, v. 57, p. 241. Also Chem. & Drug. 1910, v. 76, p. 491.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 50) report that 3 samples of essential oil of mustard had a specific gravity between 1.018 and 1.020.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 136), in commenting on the proposed Ph. Brit. V requirements for mustard oil, state that the specific gravity of natural mustard oil at 15° varies from 1.014 to 1.025. The allyl isothiocyanate value is required to be at least 92 per cent, and Hill and Umney give at the same time a method for determining the content. Their minimum requirement of deci-normal silver nitrate solution for 0.1 gm. of oil, however, corresponds to a content of 93.2 per cent allyl isothiocyanate. Schimmel & Co. regard the value of 92 per cent as more appropriate.

Hill and Umney, replying to criticisms, state with regard to oleum sinapis that according to Schimmel, the natural oil sometimes has a specific gravity as low as 1.014. The authors think that the synthetic oil might be made official as suggested by Sachsse. It is used only externally at any rate in pharmacy.—Pharm. J. 1910, v. 31 (85), p. 437.

The fifteenth annual report of the Local Government Board for Scotland shows one sample of mustard oil examined to have been adulterated.—*Ibid.* p. 65.

OLEUM TEREBINTHINÆ.

Wilcox, Levi, reports that the Department of Agriculture has issued a regulation, F. I. D. No. 58, whereby turpentine is eliminated from the Pure Food Law if the original package be marked "Not for Medicinal Use" or "For Technical Purposes Only," etc. Hiding behind this regulation a large traffic in adulterated turpentine has been carried on, and frequently some of the goods have been bought and sold for medicinal use by innocent but uninformed wholesale druggists.—Proc. N. W. D. A. 1910, p. 210.

Gehe & Co. (Handels-Bericht, 1910, p. 85) point out that the high prices for American oil of turpentine are accompanied by marked increase in the number and kind of adulteration that is being practiced.

Schimmel & Co. (Semi-Annual Report, October 1910, pp. 132-141) review some of the recent literature relating to the production and uses of oil of turpentine.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 78, October 31, pp. 7–8) discusses the adulteration of oil of turpentine in various sections of the United States.

Notices of Judgment No. 220, 248 and 337 relate to adulteration and misbranding of turpentine.

Akerman, A., thinks that the center of the turpentine industry will soon be in Mexico and points out that there are vast forests in that country of what is known as "slash" which will yield as much turpentine as the native tree.—Southern Pharm. J. 1910, v. 2, p. 219.

Pearson and Sechler assert that the present pharmacopœial tests for the absence of petroleum benzin, kerosene, or similar hydrocarbons may not be reliable if allowed to stand over night.—Merck's Rep. 1910, v. 19, p. 45.

Rippetoe, John R., thinks that the test for absence of petroleum benzin, kerosene or similar hydrocarbons is not satisfactory, as the layer in samples known to be pure will measure more than 0.35 cc.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1063.

Alcock, F. H., asserts that the Ph. Brit. characters for oil of turpentine are not so fully set forth as is desirable.—Pharm. J. 1910, v. 31 (85), p. 275.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 25) report that the optical rotation found in genuine oils as usual showed much variation, the range observed being from −2.65° to +2.25°.

Schimmel & Co. (Semi-Annual Report, April 1910, pp. 102–120) review much of the recent work that has been done on oil of turpentine, and incidentally point out that the steady increase in the consumption of the oil in conjunction with the decrease of the pine forests has led to a search for substitutes, the composition and chemistry of some of which are referred to.

Kollo, Constantin, discusses the determination of evaporation residues of oil of turpentine.—Pharm. Zentralh. 1910, v. 51, pp. 154–155.

Beilstein, Christian, reports on a lot of oil of turpentine which failed to conform to the U. S. P. test for the absence of petroleum benzin. The residue corresponded to 18 per cent. The U. S. P. allows a maximum of 7 per cent. The adulterant had the odor of kerosene.—Proc. N. W. D. A. 1910, p. 103.

Klein, Fred., outlines a test for the detection of small amounts of benzin in turpentine.—J. Ind. & Eng. Chem. 1910, v. 2, p. 389.

Eibner and Hue, in an article on oil of turpentine and its substitutes, discuss the estimation of benzin and of petroleum in turpentine by means of sulphuric acid.—Chem. Ztg. 1910, v. 34, pp. 643–645; 657–659.

Jacobs, S. S., reports some points of difference between gum and wood turpentine, and points out that the only distinctive difference between the fractions of the 2 varieties of oil appears to be the characteristic odor peculiar to each.—Am. J. Pharm. 1910, v. 82, p. 242.

Blarez, Ch., reports on the examination of French oils of turpentine.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 219–228, 241–253. See also Vèzes.—Ann. Falsif. 1910, v. 3, pp. 265–271.

Vaubel, Wilhelm, reports on the adulteration of oil of turpentine with oil of copal.—Ztschr. ang. Chem. 1910, v. 23, p. 1165.

Fendler, Frank and Stüber report on a sample of turpentine substitute which was found to be a benzol product.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 19, p. 373.

Marcusson, J., reviews the properties of oil of turpentine and of turpentine substitutes.—Chem. Ztg. 1910, v. 34, pp. 285–286.

Coste, J. H., reports observations on the examination of turpentine substitutes and the determination in turpentine of hydrocarbons other than terpenes.—Analyst, London, 1910, v. 35, pp. 112–117.

Nicolardot and Clément present a note on the examination of turpentine oils, with tabulated statements of their results.—Ann. chim. analyt. 1910, v. 15, pp. 53–57; 170–172. Also Bull. Soc. chim. France, 1910, v. 7, pp. 105–109; 173–176.

Beal, George D., quotes from the last report of the Ohio Dairy and Food Department, 5 samples of turpentine examined, 2 passed, 3 failed.—Proc. Ohio Pharm. Ass. 1910, p. 73.

OLEUM TEREBINTHINÆ RECTIFICATUM.

Pearson and Sechler assert that samples of unrectified oils may conform to the indefinite distinguishing specification of "no weighable residue," in the requirements for rectified oil of turpentine. More accurate requirements should be inserted.—Merck's Rep. 1910, v. 19, p. 46. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 144.

Hill and Umney suggest for the oil distilled from the oleoresin (turpentine) obtained from *Pinus sylvestris* and other species, rectified by redistillation: A limpid colorless liquid having a characteristic odor, and pungent, somewhat bitter taste. Specific gravity at 15.5°, 0.860 to 0.870; refractive index at 25°, 1.465° to 1.480°. Distils almost entirely between 156° and 180°, leaving no appreciable residue.—Pharm. J. 1910, v. 30 (84), p. 180. Also Chem. & Drug. 1910, v. 76, p. 273.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 138), in commenting on the proposed Ph. Brit. V requirements for rectified oil of turpentine, state that it distils chiefly between 155° and 165°.

Harvey and Wilkie assert that all samples of turpentine, even when freshly rectified, leave a distinct residue on distillation.—Chem. & Drug. 1910, v. 76, p. 421.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, p. 260) calls attention to a communication by Arnold (Brit. Med. J., 1910, No. 2586, p. 195), who shows oil of turpentine to be valuable in the treatment of typhoid.

OLEUM THEOBROMATIS.

Lucas and Bird point out that the determination of the specific gravity of the oil of theobroma appears to have been a source of trouble, and recommend that 72 hours be allowed to elapse between cooling and taking the specific gravity in accordance with the saponification value, refractive index and iodine value. They outline a proposed monograph for inclusion in the Ph. Brit.—Brit. & Col. Drug. 1910, v. 58, pp. 315, 316.

Dohme and Engelhardt state that the Ph. Hung. III directs that the acid number of oil of theobroma should be less than 2, and the iodine number between 32 and 36.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1173.

"Young Student" calls attention to the inconsistencies in the U. S. P. description of oil of theobroma, where in one place it is described as a "pale yellowish, transparent liquid," and in another it is stated that "when dispensed it should be completely liquefied by warming;" again, that the "congealing point should be between 18° and 22°."—Chem. & Drug. 1910, v. 77, p. 531.

Scoville, W. L., reports that cacao butter varies in melting point from 32.5° to 38°. Enough to make trouble in suppositories of varying composition. Proc. Am. Phaim. Ass. 1910, v. 58, p. 742.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 24) report that 7 samples of cacao butter were tested. The melting point varied from 29.5° to 34.5°; acid value, 1.4 to 2.8; iodine value, 34.5 to 36.6; saponification value, 192 to 194. One Brazilian sample had a melting point of 34.5°; acid value, 1.4; iodine value, 36.6; saponification value, 194.

Röhrig, A., reports on a fluid oil of theobroma.—Pharm. Zentralh. 1910, v. 51, pp. 2–3.

Dunning, H. A. B., presents a note on combinations of oleum theobromæ, oleum ricini and cera alba, in varying proportions, as ointment bases for summer use.—Canad. Druggist, 1910, v. 22, p. 90.

Haller and Lassieur present a study of cacao butter and of the composition of essence of cacao.—Compt. rend. Acad. sc. 1910, v. 150, pp. 1013–1019.

Prochnow, A., discusses the estimation of the fat content of cacao and chocolate, and the testing of oil of theobroma for foreign fats and oils.—Arch. Pharm. 1910, v. 248, pp. 81–88.

OLEUM THYMI.

Delpy, Hedwig, reports a pharmacognostical study of *Thymus vulgaris* L.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, p. 262.

LaWall and Bradshaw report finding from 7.4 to 10.2 per cent ash in thyme herb.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Noyes, Reinold, states that there are two varieties of oil of thyme, the red or the first distillation and the white, or the redistilled. To keep the white from turning red with age it became the custom to distil it with turpentine, which of course reduced its strength. The result was that the white, or so-called purified, was really less pure than the red.—Proc. Minnesota Pharm. Ass. 1910, p. 77.

Beilstein, Christian, reports red thyme oil deficient in thymol content.—Proc. N. W. D. A. 1910, p. 100.

Jeancard and Satie assert that a colorless oil of thyme is the result of rectification, for the oils obtained directly from the distillation of the plants are colored and sometimes highly colored.—Pharm. Era, 1910, v. 43, p. 143. Also Am. Druggist, 1910, v. 56, p. 43.

Pearson and Sechler assert that several samples of oil of thyme examined by them have not met the present requirements. The specific gravities varied from 0.874 to 0.911.—Merck's Rep. 1910, v. 19, p. 46. See also Proc. Pennsylvania Pharm. Ass. 1910, p. 144.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 145), commenting on the requirement proposed by the Second International Congress of the White Cross, for oil of thyme, that "It is a thick, reddish-brown oil," state that the adjective "thick" gives a wrong impression of the consistency of thyme oil.

Simmons, Wm. H., for estimation of phenols in thyme oils, has found a 10 per cent solution of caustic potash to give the best results, the separation of unabsorbed oil being cleaner.—Chem. & Drug. 1910, v. 76, p. 304.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 139), in commenting on the suggestion that a 10 per cent caustic solution be used for the estimation of phenols, point out that their experience shows that this would be of no advantage; a 5 per cent solution being sufficient.

Hill and Umney suggest for the oil distilled from the fresh herb, *Thymus vulgaris:* Reddish brown in color, having the characteristic odor of thyme and a pungent aromatic taste. Specific gravity at 15.5°, 0.920 to 0.950; optical rotation at 20°, slightly lævorotatory (for this test the oil must be redistilled); refractive index at 25°, 1.480° to 1.495°. Soluble in 2 volumes of 80 per cent alcohol. It should contain not less than 25 per cent of phenols (thymol and carvacrol) when tested by the process described under oleum caryophylli.—Pharm. J. 1910, v. 30, (84), p. 180. Also Chem. & Drug. 1910, v. 76, p. 273.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 138), in commenting on the Ph. Brit. V requirements for thyme oil, think that the minimum limit of specific gravity should be placed at 0.900, else it is out of harmony with the minimum phenol content allowed.

Heine & Co. believe that oil of thyme should contain at least 25 per cent of phenols.—Brit. & Col. Drug. 1910, v. 57, p. 241.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 75) report that genuine thyme oils (origanum) have varied in specific gravity from 0.910 to 0.950. Red oils have varied in specific gravity from 0.9124 to 0.924, and in phenols from 31 to 40 per cent.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 25) report figures for five samples: specific gravity, 0.911 to 0.918; optical rotation, $-0.75°$ to $-1.25°$; phenols, 34.6 to 44.0 per cent. All were soluble in 2 volumes of 80 per cent alcohol.

OLEUM TIGLII.

Eldred, Frank R., reports that 8 lots of croton oil were found to vary in specific gravity at 15° from 0.942 to 0.948; index of refraction at 20°, from 1.4784° to 1.4785°; iodine value (Wijs), from 104.0 to 116.0; and saponification value, from 200.0 to 235.0.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 896.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 29) report that 7 samples of croton oil had a specific gravity from 0.9412 to 0.946. This oil may be deleted from the next Ph. Brit.

Greenish, Henry G., states that Lucas' statement to the contrary notwithstanding, there is at present no intention on the part of the General Medical Council of omitting croton oil from the forthcoming edition of the Ph. Brit.—Pharm. J. 1910, v. 31 (85), p. 628.

Yeager, Wm. H., asserts that Croton Tig. is one of the great homœopathic remedies and the surest way of impressing this upon the mind of the student is for him to take a drop of the tincture and see what happens to him.—Hahnemann. Month., 1910, v. 45, p. 373.

OPII PULVIS.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 42) point out the Ph. Germ. V requires that powdered opium be a medium fine powder, adjusted by means of rice starch to contain 10 per cent of morphine. On drying at 100° it should not lose more than 8 per cent in weight.

Vanderkleed, Chas. E., reports 7 assays of powdered opium, lowest 12.035 per cent, highest 13.160 per cent morphine; all above standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

OPIUM.

Fichtenholtz, A., quotes Tschirch as authority for the statement that opium comes from *opos*, meaning juice of juices.—J. Pharm. et chim. 1910, v. 2, p. ii.

Gehe & Co. (Handels-Bericht, 1910, p. 87) discuss the economic conditions of the opium market, review the international opium conference held in Shanghai, and call attention to the fact that during the past year the successful synthesis of an opium alkaloid, laudanosin, has been accomplished.

Caesar & Loretz (Jahres-Ber., 1910, p. 39) report that the opium crop in Asia Minor is expected to aggregate 10,000 cases. They present a table showing the number of cases and the value of the opium produced in Asia Minor from 1900 to 1910.

Browne, Frank, publishes a report, presented to the Hong Kong Legislative Council, on opium: its nature, composition, preparations and methods of consumption. He agrees with Wynter Blyth that opium smoking seems to injure the health of Asiatics but little.—Pharm. J. 1910, v. 30 (84), p. 452. Also p. 542.

The British Consul at Bushire reports that China has again received considerably more of the export of Persian opium than the United Kingdom.—Chem. & Drug. 1910, v. 77, p. 874.

van Itallie and Kerbosch comment on the cultivation of opium in northern China.—Arch. Pharm, 1910, v. 248, pp. 614–615. Also Pharm. Weekblad, 1910, v. 47, pp. 1191–1193.

The Consular and Trade Reports (Mar. 12, 1910, p. 95) calls attention to the increase in shipments of opium from Smyrna to the United States.

Cohn, Georg, discusses the chemistry of the opium alkaloids and their derivatives.—Pharm. Zentralh. 1910, v. 51, pp. 316–323; 335–343.

van Itallie and Kerbosch present a contribution on the composition of opium, the average alkaloid content and the absence of one or the other of the commoner alkaloids from different varieties of opium.—Arch. Pharm. 1910, v. 248, pp. 609–613. See also Pharm. Weekblad, 1910, v. 47, pp. 1186–1191, and Bull. sc. pharmacol. 1910, v. 17, pp. 691–697.

Kerbosch, G. J. M., reports observations on the formation and the distribution of several alkaloids in *Papaver somniferum* L. In summing up his observations he notes that the sequence in which the alkaloids are found in the growing plant is: Narcotine, codeine, morphine, papaverine and thebaine.—Arch. Pharm. 1910, v. 248, pp. 526–567. Also Pharm. Weekblad, 1910, v. 47, pp. 1062–1074, 1081–1094, 1106–1119.

Gonnermann, M., reports the isolation of an enzyme from poppy capsules.—Apoth. Ztg. 1910, v. 25, pp. 804–805.

Rabe and McMillan present a contribution on the chemistry of narcotine and hydrastine, and discuss some of their derivatives.—Ann. Chem. 1910, v. 377, pp. 223–258.

Salway, Arthur Henry, discusses the synthesis of cotarnine and reports the successful conclusion of this task.—J. Chem. Soc. Lond., 1910, v. 97, pp. 1208–1219.

Goeckel, Henry J., reports that of 87 opium assays made since 1906, the maximum was 13.657 per cent, the minimum, 8.898 and the average, 12.385 per cent of morphine.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1050–1051.

Vanderkleed, Chas. E., reports 14 assays of opium gum, lowest, 7.960, highest 13.050 per cent morphine; 13 above and 1 below standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Lyons, A. B., points out that the international standard for the tincture of opium is one per cent by weight of anhydrous morphine. The U. S. P. standard is 1.2 to 1.25 gm. of hydrated morphine (about 1.13 to 1.18 gm. of anhydrous morphine per 100 cc. of tincture). The difference between the two standards is not nearly so considerable as it first appears.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 798–799.

A review of the Ph. Germ. V points out that while this Pharmacopœia requires that opium containing 12 per cent of morphine be used in the making of the several pharmacopœial preparations, these preparations are standardized on the basis of powdered opium which is required to contain 10 per cent of morphine. The opium for the latter preparation is directed to be diluted with rice starch.—Pharm. Ztg. 1910, v. 55, p. 1004.

See also Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 41.

Dohme and Engelhardt state that the Ph. Hung. III directs that opium dried at 60° should contain 10 per cent of morphine. The method of assay is outlined.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1189.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 53) report that 13 consignments of opium were assayed and contained 9.7 to 12.4 per cent morphine in their natural moist condition, the moisture in fresh imports varying from 23 to 29.7 per cent. A sample of "Smoking" opium (Asia Minor) examined, had the very high morphine content of 15 per cent, with moisture 23 per cent. One sample of Tokat opium contained 10.9 per cent of morphine.

Caesar & Loretz (Jahres-Ber., 1910, pp. 101–103) outline and discuss Dieterich's method for the assay of opium and call attention to the morphine standard for this drug included in the several pharmacopœias.

Schneider, Albert, reports with illustrations a micro-chemical test for raw opium, smoking opium, and opium preparations.—Merck's Rep. 1910, v. 19, pp. 245–247.

Lyons, A. B., thinks the U. S. P. assay method is satisfactory but may be improved in several particulars. He calls attention to several slight modifications which would tend to improve the method.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 825–826.

Dohme, A. R. L., in reply to an inquiry, states that the assays for opium embodied in foreign pharmacopœias give lower results, but only about two-tenths per cent, which is probably within the range of error.—*Ibid.* p. 852.

Dohme and Engelhardt record the assay methods for opium as given in thirteen of the foreign pharmacopœias.—*Ibid.* pp. 829–833.

Caesar & Loretz (Jahres–Ber. 1910, p. 41) present a table showing the percentage content of their 10 per cent powdered opium, when assayed by the methods given in the several pharmacopœias. They point out that the U. S. P. method is complicated, yields a highly impure morphine and gives, usually, high results.

Hoover, G. W., points out that a review of the co-operative work done in connection with the assay of opium shows a variation of between 5 and 10 per cent of morphine, based on the amount present as 100 per cent.—Proc. Ass. Off. Agric. Chem., 1910, 27th Ann. Conv., p. 182. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Diekman, Patch and others discuss the U. S. P. opium assay.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 777–778.

Elvove, Elias, in a report of further studies in the application of the Volhard method to the estimation of alkaloids, calls attention to the possibilities of applying this method for the determination of narcotine.—J. Am. Chem. Soc. 1910, v. 32, p. 137.

Scoville, W. L., states that his comparative experiments have been so constantly in favor of the Stevens' method of assay for opium that he has practically abandoned the U. S. P. method.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 823.

Eaton, E. O., outlines a simplified extraction method for the determination of morphine in opium and opium preparations.—Proc. Ass. Off. Agric. Chem. 1910, 27th Ann. Conv., pp. 188–189. (Bull. Bur. Chem., U. S. Dept. Agric., 1911, No. 137.)

Rippetoe, John R., states that, in the assay of opium, agitating the flask every 10 minutes during 3 hours does not prove satisfactory, as the results are usually lower than may be obtained by the use of a mechanical shaker.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1063.

Marcelet and Marcelet contribute a note on the desiccation of opium in the estimation of morphine according to the Ph. Fr. V process; they conclude that this can be effectuated only when the opium no longer loses weight after desiccation at 60°.—Bull. sc. pharmacol. 1910, v. 17, p. 446.

van der Wielen, P., discusses the estimation of morphine, narceine and codeine in opium and its galenical preparations. He shows that the extraction of opium with diluted alcohol yields preparations richer in alkaloids than does extraction with water; and that an alcoholic solution of an aqueous extract, such as the laudanum of the Ph. Fr. V, is by no means identical with the alcoholic tinctures of the other pharmacopœias.—*Ibid.*, pp. 59–63.

Riedel's Berichte (1910, p. xxix) reports difficulty in securing opium free from starch, due to the fact that dealers in Asia Minor are diluting the naturally high per cent opium by additions of starch, or starch containing materials. For the estimation of morphine the Helfenberger gravimetric method is recommended.

Sayre, L. E., reports on 1 sample of opium: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.

The Committee of Reference in Pharmacy submits a modified monograph for extractum opii and recommends the use of calcium phosphate as a diluent so that the powdered extract shall contain 20 per cent of morphine.—Brit. & Col. Drug. 1910, v. 58, p. 12.

Pancier, Félix, contributes a note on the estimation of morphine in Sydenham's laudanum, and criticises the method of preparation indicated by the Ph. Fr. V.—J. pharm. et chim. 1910, v. 1, pp. 586–589; v. 2, pp. 266–267. See also Grimbert, L., *Ibid.* v. 2, pp. 105–09, and Debourdeaux, Léon, Bull sc. pharmacol. 1910, v. 17, pp. 382–385.

Ramati, R., contributes a note on the preparation of laudanum, apropos of the Ph. Ital. III.—Boll. chim. farm. 1910, v. 49, p. 469.

Dunning, H. A. B., thinks that, with proper admixture with some inert non-adhesive material tincture of opium could readily be made by percolation and more completely extracted than by the present method.—Am. J. Pharm. 1910, v. 82, p. 196.

Havenhill, L. D., outlines modified formulas for the U. S. P. tinctures of opium.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 790.

Beringer, George M., thinks that the present official method for tincture of opium will yield a satisfactory preparation. The time is fully at hand when under the existing conditions the pharmacist must be prepared to assay his own preparations and as tincture of opium keeps fairly well it can be made in sufficient quantity to warrant assay without materially adding to the cost.—*Ibid.* p. 782.

Hereth, F. S., suggests that the Pharmacopœia permit of the extraction of opium with water and finishing the product by the addition of sufficient alcohol. Practical Druggist, 1910, v. 28, p. 64.

Thome, E. R., offers a formula for tincture of opium which he thinks just as satisfactory but less tedious and far less expensive than the present one.—*Ibid.* p. 123.

Porter, C. S., reports that tinctures of opium have been found as low as 12 per cent of the required standard.—Proc. Kentucky Pharm. Ass. 1910, p. 46.

Notices of Judgment No. 226 and 333 relate to misbranding of laudanum.

Table showing some of the analytical results reported for tincture of opium.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Sayre, L. E	9	8	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.
Hill, Edward C	1	1	Bull. Colorado Bd. Health, 1910, v. 10, No. 1, p. 10
Barnard, H. E	21	6	Proc. Indiana Pharm. Ass., 1910, p. 56.
Beal, George D	16	5	Proc. Ohio Pharm. Ass., 1910, p. 73.
Knight, Henry G	3	2	Rep. Dairy, Food & Oil Com. Wyoming, 1910, p. 62.
The Local Government Board.	20	1	Pharm. J. 1910, v. 30 (84), p. 33.

Xrayser II cites as the earliest instance of the use of the word paregoric as indicating an anodyne, and usually one containing opium, is in Salmon's "Synopsis Medicinæ" (1695)—"Anodyns, Paregoricks, and Easers of Pain."—Chem. & Drug. 1910, v. 76, p. 217.

Horn, Wilbur F., outlines a method for making camphorated tincture of opium by simple solution.—Proc. Pennsylvania Pharm. Ass. 1910, p. 247.

Jaffa, M. E., reports the examination of 4 samples of paregoric: all illegal.—Bull. California Bd. Health, 1910, v. 5, p. 199 and *Ibid.* v. 6, p. 36.

The Local Government Board (38th Ann. Rep. Part II) reports 6, out of 67, samples of paregoric examined in 1908, not standard.—Pharm. J. 1910, v. 30 (84), p. 33.

Edel, Frank, discusses the making of deodorized tincture of opium and recommends the use of paraffin in place of benzin or ether.—Spatula, 1910, v. 17, pp. 73–74. See also Nitardy, F. W., Bull. Am. Pharm. Ass. 1910, v. 5, p. 375, and Thome, E. R., Practical Druggist, 1910, v. 28, p. 123.

Barnard, H. E., reports assaying 14 samples of deodorized tincture of opium; 6 were U. S. P. or above, and 8, or 57 per cent, were below the U. S. P. standard. The lowest sample assayed 0.754 gm. in 100 cc. and the highest assayed 1.344 gm.—Proc. Indiana Pharm. Ass. 1910, p. 56.

Puckner and Hilpert report the examination of compressed tablets of opium, bismuth and phenol and present a diagram graphically portraying the variability in the composition of the tablets examined.—Rep. Chem. Lab. Am. M. Ass. 1910, v. 3, pp. 85–88.

An editorial (D.-A. Apoth. Ztg. 1910–11, v. 31, p. 62) calls attention to the publication by the Department of Commerce and Labor on the wide spread abuse of opium.

Wright, Hamilton, presents a copy of the report of the International Opium Commission.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 41–49.

Koch, Christopher, asserts that 400,000 pounds of opium are imported annually, 80 per cent of which is manufactured into morphine, and 75 per cent of this morphine is consumed by the fiend.—Proc. Pennsylvania Pharm. Ass. 1910, p. 198.

An editorial (N. A. R. D. Notes, 1910, v. 10, pp. 1213–1215) quotes Lyman F. Kebler who presents a list of medicines which it is claimed contain an excessive amount of narcotic drugs.

Schieffelin, Wm. Jay, states that while there is a tremendous use and abuse of opium in this country the responsibility of this can not be laid at the doors of the members of the Proprietary Association.—Proc. N. W. D. A. 1910, p. 350.

Dimmett, Addison, in discussing the sale of opium, thinks that this drug should be sold or dispensed only on a prescription and no re-fill permitted. The responsibility for the use of opium should rest, where it rightfully belongs, on the physician.—Proc. Kentucky Pharm. Ass. 1910, pp. 104–110.

An editorial (D.-A. Apoth, Ztg. 1910–11, v. 31, p. 90) comments on the pernicious activity evidenced on the part of Government officials to restrict legitimate traffic in opium.

An editorial (Pacific Pharmacist, 1909–10, v. 4, p. 220) discusses the opium habit in the U. S. Army, and asserts that according to the San Francisco daily papers, from 10 to 25 per cent of the soldiers stationed at the military reservation, the Presidio, are addicted to the use of opium.

Grady, Clyde, in discussing the sale of opium to habitues, expresses the belief that the druggists among themselves can control the situation without going too much to the legislature.—Proc. Kentucky Pharm. Ass. 1910, pp. 102–104.

Heffner, Edgar F., reports experiments with *Combretum sundaicum* as an aid in the cure of opium and morphine habit.—Proc. Pennsylvania Pharm. Ass. 1910, pp. 365–366.

Brady, William, notes that the fact that opium is largely eliminated in the stomach explains the nausea which often follows its use, and indicates repeated stomach washings in opium poisoning, because it has been shown that the drug may be resorbed into the blood.—N. York M. J. 1910, v. 91, p. 211.

Zeelen, Victorie, reports observations on the action of the combined opium alkaloids.—Ztschr. exper. Path. u. Therap. 1910, v. 8, pp. 587–600.

An editorial (Pharm. J. 1910, v. 30 (84), p. 230) comments on some opinions, expressed at the Budapest Congress, controverting the idea that children are more susceptible than adults to the toxic effects of opium, and urges the need of corroboration by many other authorities before they are accepted as being beyond question.

Short and Salisbury, in an interesting paper on the action of cutaneous anæsthetics, states that although Lotio Plumbi cum Opio is still used every day, and laudanum is dropped into aching ears, and morphine suppositories are given for piles, it is becoming well known that opium is not a local anæsthetic.—Brit. M. J. 1910, v. 1, p. 561. See also p. 1521 for an adverse opinion.

Monroe, A. Leight, quotes Lutze who thinks that opium is the remedy in lack of sensitiveness of the nervous system, deficient reaction of the life forces.—Hahnemann. Month. 1910, v. 45, p. 72.

Harbert, J. P., states that the use of opium in eye disturbances has been very limited, except as an anodyne. As such, however, it ranks of first importance for the relief of painful eye affections.—Eclectic M. J. 1910, v. 70, p. 70.

Wilder, Alexander, thinks that Trousseau was right, that opium not only relieves the pain of inflammation, but the inflammation likewise. He has proved this in his own person more than once.—*Ibid.* pp. 533–534.

A number of references on the uses of opium will be found in the Index Medicus.

OXYGEN (COMPRESSED).

Hunt, Reid, reports that oxygen is included in the Ph. Fr., Ph. Ital., Ph. Mex. and Ph. Hisp.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 772.

Hinrichs, Gustavus, discusses the true atomic weights of oxygen and silver. He asserts that the departures for oxygen and for silver are essentially alike, so that the values $O=16$ and $Ag=108$ stand and fall together.—Proc. Am. Philosoph. Soc. 1910, v. 49, pp. 359–363.

Jorissen, W. P., reports observations on the estimation of oxygen in aqueous solution.—Ztschr. anal. Chem. 1910, v. 49, pp. 424–427.

Linder, Oscar, discusses the manufacture and industrial applications of ozone.—Tr. Am. Inst. Chem. Eng. 1910, v. 3, pp. 188–211.

Small, Ralph D., reviews the present status of ozone, with reference to air purification.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 534–537.

Stewart, G. N., continuing his studies on the circulation in man, discusses the influence of oxygen inhalation on the circulation in a case of cyanosis.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, pp. 477–500.

An abstract (Brit. M. J.) discusses the administration of oxygen and points out that the usual methods of administering oxygen by delivering it from a steel bottle in a constant stream, are wrong in principle and wasteful.—Therap. Gaz. 1910, v. 34, p. 16.

Delcourt, A. (New Orleans M. & S. J., September 1910) asserts that a mixture of oxygen and peroxide of hydrogen is an antiseptic and an antibactericide of the first order, superior to those actually used, having no odor and no toxicity.— J. Am. M. Ass. 1910, v. 55, p. 1146.

Additional references on the use of oxygen will be found in the Index Medicus.

PANCREATINUM.

Riedel's Berichte (1910, p. xlviii) presents a monograph giving the composition, properties and tests for pancreatin.

Sherman, Kendall and Clark report experiments on commercial preparations of pancreatic amylase.—J. Am. Chem. Soc. 1910, v. 32, pp. 1080–1086.

Kendall and Sherman report a study of the action of pancreatic amylase.—*Ibid.* pp. 1087–1105.

Rippetoe, John R., states that owing to the variable composition and freshness of milk, determining the converting power of pancreatin is not very satisfactory. It would seem advisable to remove this test from the Pharmacopœia. The starch should be more clearly defined by stating the kind of starch to be used, although corn starch is possibly understood.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1063.

Goeckel, Henry J., reports that of eleven lots of pancreatin examined only five were accepted as being of U. S. P. strength, six passed the amylolytic test.—*Ibid.* p. 1049.

Sayre, L. E., reports on 4 samples of pancreatin: 3 passed; 1 illegal.—*Ibid.* p. 1097.

Hemm, Francis, notes that pancreatin is incompatible with pepsin and strong mineral acids and strong alkalies.—Proc. Missouri Pharm. Ass. 1910, p. 101.

Choay, E., discusses the action of heat upon the dried extract of pancreas. He concludes that a temperature of 80° to 100° for one or two hours has so little effect as practically to be nil.—J. pharm. et. chim. 1910, v. 1, pp. 10–16.

Buglia, G., reports a study of the influence of bile salts on the amylotic action of pancreatin.—Biochem. Ztschr. 1910, v. 25, pp. 239–261.

Osborne, Oliver T., asserts that there is probably no reason for the administration of pancreatin internally. Pancreatin is of value when combined with its proper amount of alkali as a predigestant of protein foods. Its value for this purpose is very great.—J. Am. M. Ass. 1910, v. 54, p. 290.

PARAFFINUM.

Zaloziecki, R., describes a new method for the production of paraffin.—Chem. Ztg. 1910, v. 34, p. 265.

Porges, Ph., discusses the application of refrigeration in the Austrian paraffin industry.—Ztschr. ang. Chem. 1910, v. 23, p. 2270.

Weiser-Mata, J., discusses the factory process for the production of paraffin by the use of artificial cold.—*Ibid.* p. 2270.

Marcusson and Meyerheim report observations on the chemical behavior of paraffin and outline methods for testing paraffin.—*Ibid.* pp. 1057–1060.

Ferraro, A. (L'Union pharm. 1910, 50, 400) outlines a method for the detection of fats in paraffin.—Year-Book of Pharmacy, 1910, p. 162.

Singer, L. (Chem. Rev. Fett- u. Harzindustrie 1909, p. 202) presents some observations on the testing of paraffin.—Pharm. Zentralh. 1910, v. 51, pp. 574–575.

Bird and Lucas suggest: Specific gravity, 0.820 to 0.940; melting point, 54° to 60°; 5cc. of alcohol shaken with 5 gm. of melted paraffin should not redden blue litmus paper; 5 gm. heated, burns with a luminous flame, leaving no weighable ash.—Pharm. J. 1910, v. 31 (85), pp. 470, 472. Also Brit. & Col. Drug. 1910, v. 58, p. 317.

Lipowski and Rhode (Med. Klin. 1909, v. 5, No. 48) report the details of 8 typical cases in which the former applied his method of paraffin treatment of chronic constipation, described in J. Am. M. Ass., Sept. 4, 1909, p. 822.—J. Am. M. Ass. 1910, v. 54, p. 246.

An editorial (Brit. M. J. 1910, v. 1, p. 1258) calls attention to a recent report by Violine (Ann. d'Hyg.) of 2 cases in which paraffin injections were used to simulate tumors by soldiers who wish to secure a discharge.

Leroux, R. (Press. Méd. 1910, v. 18, No. 37) presents an improved technique for paraffin treatment of ozœna.—J. Am. M. Ass. 1910, v. 54, p. 2007.

Stokes, A. C., reports a case in which an injection of paraffin was made into the appendix in an attempt to cure indirect inguinal hernia.—*Ibid.* p. 2124.

PARALDEHYDUM.

Mittelbach, Wm., thinks that paraldehyde is rarely used and might well be dropped.—Proc. Missouri Pharm. Ass. 1910, p. 98.

Riedel's Berichte (1910, p. xxix) reports that a pure paraldehyde can have a specific gravity of 1.003, and that in testing the determination of the solidification point is more practical than the determination of the melting point.

Saradschian, Alexander, reports observations on the relative efficiency of paraldehyde given singly and in combination with other narcotics.—Ztschr. exper. Path. u. Therap. 1910, v. 8, pp. 545–552.

PAREIRA.

Rusby, H. H., states that he has met with pareira brava consisting 4 times out of 5 of spurious roots or stems.—Practical Druggist, 1910, v. 27, p. 423.

Beilstein, Christian, asserts that one lot of pareira brava consisted of roots entirely different from the official drug.—Proc. N. W. D. A. 1910, p. 105.

LaWall and Bradshaw report finding 2.9 per cent ash in pareira brava.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

PELLETIERINÆ TANNAS.

Rosenthaler and Görner, in commenting on the use of aromatic nitroderivatives, point out that many of the substances experimented with produce copious precipitates with pelletierine.—Ztschr. anal. Chem. 1910, v. 49, p. 349.

An editorial (Lancet 1910, v. 178, p. 386) details the method of administering pelletierine tannate.

PEPO.

Power and Salway report a chemical examination of pumpkin seed. They conclude that the results of their experiments do not enable them to confirm the recorded statements respecting the efficacy of either the fatty oil or the resin of pumpkin seed as a tæniafuge, and that the remedial value of pumpkin seeds cannot be considered such as to justify their recognition by a national pharmacopœia.—J. Am. Chem. Soc. 1910, v. 32, pp. 346–360.

The same authors also report a chemical examination of watermelon seed. They conclude that the seeds contain no alkaloid, and no evidence was obtained of the presence of a glucoside. The resin, both from the kernels and the shells of the seed, was administered to a dog in amounts of 1 gm. each but no obvious effect was produced.—*Ibid.* pp. 360–374.

PEPSINUM.

Hemm, Francis, states that pepsin and its preparations are still very popular and much prescribed, regardless of the fact that many question its true value.—Proc. Missouri Pharm. Ass. 1910, p. 102.

Eliel, Leo, thinks that the U. S. P. should, and no doubt will, recognize the great improvement in the production and purification of the digestive ferments. There can be no thinkable reason why a ferment of double standard could not be used in the manufacture of its official preparations.—Proc. Pennsylvania Pharm. Ass. 1910, p. 363.

Apple, Franklin M., thinks the U. S. P. standard for pepsin could readily be increased and should not be less than 1:6000.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1125–1128. See also Thome, E. R., Practical Druggist, 1910, v. 28, p. 123.

Beilstein, Abraham, reports that 3 lots of pepsin labeled 1:6000 were found to be only 1:2000 or less. One lot of pepsin labeled 1:3000 was only about 1:1000. Several other lots of pepsin were found to be much weaker than stated on the labels.—Proc. N. W. D. A. 1910, p. 107.

Hercod and Maben present a comparative study of the assay methods for pepsin prescribed by the different pharmacopœias, and outline a modified method which they believe to be more satisfactory than any of those now included in the official books.—Compt. rend. Congr. Internat. Pharm. 1910 (Brussels 1911), pp. 171–180. Also Chem. &

Drug. 1910, v. 77, pp. 371–373, 405, and Pharm. Post, 1910, v. 43, pp. 735–737.

The discussion on the methods of assay for pepsin with the recommendation that the Congress is in favor of international unification of assay methods for pepsin is reprinted.—Compt. rend. Congr. Internat. Pharm., 1910 (Brussels, 1911), p. 249. See also Pharm. Post, 1910, v. 43, p. 727, and Bull. Soc. roy. pharm. Brux. 1910, v. 54, p. 295.

Dohme and Engelhardt outline the Ph. Hung. III method for determining the proteolytic power of pepsin.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1189.

Kehler discusses methods of testing pepsin and asserts that the Ph. Germ. IV method is not satisfactory.—Apoth. Ztg. 1910, v. 25, pp. 229–230.

Schenk comments on the contribution by Kehler and presents some preliminary notes on pepsin examination.—*Ibid.* p. 273.

Riedel's Berichte (1910, p. xxix) states that in testing pepsin it is preferable to use a medium-fine sieve in place of the coarse sieve directed by the Ph. Germ. IV for comminuting the boiled egg albumin.

Rippetoe, John R., states that owing to the variable composition of eggs, it is an advantage to use a standard pepsin for carrying out a blank assay on the coagulated albumen, in determining the proteolytic power of the sample under examination.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1063.

Hata, S., reports observations on the valuation of pepsin by the clearing of turbid solutions of albumen.—Biochem. Ztschr. 1909–10, v. 23, pp. 179–185.

Hirayama, K., reports observations on the influence of various acids on pepsin tested according to the methods proposed by Mett and Sörensen.—Ztschr. physiol. Chem. 1910, v. 65, pp. 290–292.

Oguro, Y., discusses the action of pepsin at low temperatures. He points out that at 8°, at 5° and even at 0° there is an evident action of pepsin on clearing up a solution of ricin.—Biochem. Ztschr. 1909, v. 22, pp. 278–282.

Patch, E. L., asserts that pepsin is usually of good quality and digestive power. One lot examined tested less than 1:1000.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 746.

Table showing some of the analytical results reported for pepsin.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Bernegau, L. H	75	8	Proc. Pennsylvania Pharm. Ass. 1910, p. 144.
Local Government Board	10	6	Pharm. J. 1910, v. 30 (84), p. 33.
Lythgoe, Hermann C	9	5	Rep. Massachusetts Bd. Health, 1910, p. 364.
Sayre, L. E	10	2	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.
Goeckel, Henry J	11	4	*Ibid.* p. 1049.

Sayre, L. E., reports an examination of 47 samples of pepsin preparations, only 5 of which were found to be of standard strength.—Bull. Kansas Bd. Health, 1910, v. 6, p. 125.

See also *Ibid.* p. 53 and Proc. Kansas Pharm. Ass. 1910, p. 57.

Thum, John K., asks why have an elixir of pepsin, essence of pepsin, liquid pepsin and aromatic liquid pepsin, and expresses the belief that the uselessness of these combinations of ferments as therapeutic agents has been proven.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 253.

Sayre, L. E., calls attention to the variable nature of pepsin preparations, and emphasizes the importance of great care in dispensing this class of agents. He asserts that it is impossible to tell, from the appearance or taste and other physical properties, whether a pepsin preparation is of any value as a digestant. An examination of a large number of liquid preparations of pepsin demonstrated that a majority of them are practically valueless as medicinal agents.—Bull. Kansas Bd. Health, 1910, v. 6, p. 124.

Nixon, C. F., reports the results of systematic observations of pepsin and pepsin preparations, and recommends a formula for an essence of pepsin that can be made extemporaneously.—Proc. Am. Pharm. Ass., 1910, v. 58, pp. 1264–1266.

Petit and Petit discuss pepsin elixirs and the continued maintenance of their peptonizing power. They conclude that, after six and a half years, the elixirs examined had undergone no change, or such as was of no moment.—J. pharm. et chim. 1910, v. 1, pp. 159–156.

Thibault, Pierre-Eugène, replies to criticisms of his work, made in the above communication.—*Ibid.* pp. 480–484.

Désesquelle (Bull. méd. July 3, 1909) asks if it would not be wiser to call the elixir of pepsin of the Codex a wine, since it contains only 7.5 per cent of alcohol and we are in the habit of giving the name elixir to preparations relatively rich in alcohol.—Rép. pharm. 1910, v. 22, p. 50.

Schmatolla, O., discusses the clarification of wine of pepsin and the causes for precipitation in this preparation.—Pharm. Ztg. 1910, v. 55, p. 223.

The Committee of Reference in Pharmacy point out that the direction for making glycerinum pepsini should read: "Add the pepsin, dissolve, make up to the required volume and filter."—Brit. & Col. Drug. 1910, v. 58, p. 13.

Tyrode, M. Vejux, refers to the innumerable elixirs in the U. S. P. and N. F. which act as vehicles and which obviate the use of patented essences of pepsin chiefly employed as a vehicle, since the pepsin in them is rendered inert by alcohol, and, in fact, is present in such small quantities that quarts would be necessary to digest a helping of beefsteak.—Boston M. & S. J. 1910, v. 163, p. 123.

Chassevant notes that pepsin is much more frequently prescribed by foreigners, especially Americans, than by the French; that the American pepsin is three times as strong as the French. In sufficient dose and when quite pure, it gives excellent results in certain cases of dyspepsia. The ferment should be introduced at the opportune moment, when pyrosis is manifest.—J. pharm. et chim. 1910, v. 1, p. 612.

Abstr. Also in Bull. sc. pharmacol. 1910, v. 17, p. 564.

Sawitsch, W., discusses the identity of pepsin and chymosin.—Ztschr. physiol. Chem. 1910, v. 68, pp. 12–25.

Hammarsten, Olof, reports comparative studies of pepsin and chymosin action in the dog and in the cat.—*Ibid.* pp. 119–159.

Funk and Niemann report observations on the filtration of rennin and of pepsin.—*Ibid.* pp. 263–272.

Sayre, L. E., reports that the study of pepsin preparations made in the drug laboratory leads him to believe that if physicians wish to employ an elixir of pepsin or wine of pepsin in their practice, these preparations should be made extemporaneously from the fresh material, and the patient should be informed that after a certain date the liquid ceases to be of value.—Bull. Kansas Bd. Health, 1910, v. 6. p. 16.

Osborne, Oliver T., thinks that the diminished use of pepsin is an indication that its therapeutic value as a digestant has been overestimated. He thinks it probable that the small amount generally administered is of little value in digesting an ordinary meal. He comments on the absurdity of prescribing pepsin in an alkaline medium or in combination with pancreatin. As a vehicle, pepsin preparations may have value, but there is no need for the large number offered by the National Formulary.—J. Am. M. Ass. 1910, v. 54, p. 290.

Vandevelde and Poppe report a study of the influence of sodium fluoride on the action of pepsin and trypsin. Their experiments appear to indicate that sodium fluoride does not materially influence these ferments.—Biochem. Ztschr. 1910, v. 28, pp. 134–137.

For additional references on the chemistry, pharmacology and uses of pepsin see Chem. Abstr., Zentrlbl. Biochem. u. Piophysik., and Index Medicus.

PETROLATUM.

Lucas and Bird outline a proposed monograph for soft paraffin to be included in the Ph. Brit., specific gravity at the melting point of from 0.840 to 0.870, and the melting point should be allowed to vary from 36 to 42°.—Brit. & Col. Drug. 1910, v. 58, p. 317.

Petrolatum is included in the Ph. Germ. V under the title vaselinum flavum and is required to have a melting point of from 35°–40°.—J. Pharm. Elsass-Lothringen, 1910, v. 37, p. 87.

Rathenau, F., refers to a recent decision in a German court that vaseline has become a generic title for petroleum jelly, and is no longer applicable, in Germany, as a trade mark to the product of any one firm.—Chem. Ztg. 1910, v. 34, p. 573. See also Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, p. 249.

Raubenheimer, Otto, discusses the early history of American petroleum and asserts that the foundation for the petroleum industry was laid by retail druggists.—Proc. New York Pharm. Ass. 1910, pp. 184–189. Also Drug. Circ. 1910, v. 54, pp. 621–623.

v. Lohr, reviews the production and uses of petroleum.—Ztschr. ang. Chem. 1910, v. 23, p. 576.

Ferraro, A. (Répert. pharm. [3] 21, 504) outlines a test for fats in vaseline. He states that a solution of fuchsin decolorized with ammonia is used as the test reagent. Vaseline is without action upon it but the presence of fatty substance causes a distinct coloration.—Chem. Abstr. 1910, v. 4, p. 1085.

Woolsey, J. F., reports that the trade demands a light, amber colored product, which is not readily obtained at all times; and the "Petrolatum Alba," as supplied by most refiners is far from being white.—Proc. Pennsylvania Pharm. Ass. 1910, p. 144.

Sayre, L. E., reports on 1 sample of petrolatum: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.

Ames, Fred W., jr., discusses the use of petrolatum spissum, which he characterizes as the ideal ointment base.—Merck's Rep. 1910, v. 19, p. 131.

An editorial (Lancet 1910, v. 178, p. 1086) calls attention to the contribution of Th. Rovsing on the treatment of dry arthritis by injection of vaseline.

PETROLATUM LIQUIDUM.

Lucas and Bird present a proposed monograph for liquid paraffin for inclusion in the Ph. Brit. Its specific gravity is permitted to vary from 0.860 to 0.885 so as to include the more mobile variety used in atomizers.—Brit. & Col. Drug. 1910, v. 58, p. 317.

Riedel's Berichte (1910, p. xxix) points out that a liquid paraffin with a specific gravity of from 0.880 to 0.885 begins to boil below 300°.

Woolsey, J. F., reports that the practical demand for liquid petrolatum for nasal use requires a lower specific gravity than that of the Pharmacopœia.—Proc. Pennsylvania Pharm. Ass. 1910, p. 144.

Wilkie, D. P. D. (Surg. Gyn. and Obstet. February 1910) reports favorable results from the use of sterile petrolatum in the prevention of adhesions in abdominal surgery.—J. Am. M. Ass. 1910, v. 54, p. 911.

PHENOL.

An editorial note (Meyer Bros. Drug. 1910, v. 31, p. 164) points out that phenol is recognized by the sanitary code of New York City as the proper name for carbolic acid, and states that this is more than some pharmacists and physicians have learned about modern nomenclature.

An unsigned note (Pharm. J. 1910, v. 30 (84), p. 595) comments on the dangers which are likely to arise from the mispronunciation of phenol and fennel.

Riedel's Berichte (1910, p. xxvii) points out that a pure phenol having a melting point of from 40° to 42° yields a perfectly clear solution with 12 parts of water.

Raschig, F., criticises the Ph. Germ. V requirements for phenol and cresol. He points out that the requirement that the aqueous solution (1:15) should not redden litmus is not warranted and that it is generally well-known that with litmus an aqueous solution of phenol reacts acid.—Pharm. Ztg. 1910, v. 55, pp. 1055–1056.

Autenreith and Beuttel discuss the gravimetric estimation of phenol and related substances as tribromphenolbrom.—Arch. Pharm. 1910, v. 248, pp. 112–127.

An unsigned article (Am. Druggist, 1910, v. 56, p. 274) describes a new reagent for phenol and related bodies.

Gehe & Co. (Handels-Bericht 1910, p. 98), in discussing the discoloration of phenol, point out that recent investigations appear to indicate that the red color is due to the decomposition of a small quantity of phenol to quinone, which in turn oxidizes to pyrocatechin and phenoquinone.

Hill, Edward C., reports one sample of carbolic acid which was found to be adulterated because only 60 per cent of U. S. P. strength.—Bull. Colorado Bd. Health, 1910, v. 10, No. 2, p. 8.

Eldred, Frank R., reports that eighteen lots of phenol were found to melt at from 40° to 41°, and to contain from 96 to 98.4 per cent of absolute phenol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 896.

Sayre, L. E., reports on 23 samples of carbolic acid: 8 passed; 15 illegal.—*Ibid.* p. 1095.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 58) report that 3 samples of phenol all melted at 39°, and contained 99 to 99.6 per cent phenol, when estimated with sodium bromate.

Wulling, Frederick J., reports that only 1 sample of liquefied phenol was assayed and this was found to be slightly above the pharmacopœial requirement of 86.4 per cent by weight of absolute phenol.—Northwestern Druggist, 1910, v. 11, Sept., p. 25.

Brown, Linwood A., points out that crystallized phenol absorbs moisture if exposed to a damp atmosphere, and liquefies. It is rapidly volatile, and both the crystallized and liquefied become red on exposure to light.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 149.

"H. R." suggests the liquefaction of phenol by means of alcohol instead of water. So prepared, it never freezes, is not liable to turn red, and is well adapted for oily dilutions and mixtures with volatile oils.—Pharm. Ztg. 1910, v. 55, p. 213.

Hommell, Philemon E., thinks that phenol ointment could be improved by employing a better base, and suggests the use of yellow wax and lard.—Merck's Rep. 1910, v. 19, p. 122. See also Mittelbach, Wm., Proc. Am. Pharm. Ass. 1910, v. 58, p. 793, and Hartz and McElhenie, *Ibid.* p. 1270.

Wood and Scott report observations on the freezing point curve for mixtures of camphor and phenol.—J. Chem. Soc., Lond., 1910, v. 97, pp. 1573–1578.

Puckner and Hilpert report the examination of compressed tablets of phenol, bismuth and opium and present a diagram graphically portraying the variability in the composition of the tablets examined.—Rep. Chem. Lab. Am. M. Ass., 1910, v. 3, pp. 85–88.

An answer to a correspondent (Critic and Guide, 1910, v. 13, p. 174) points out that phenol and potassium permanganate should never be prescribed together, and if prescribed should not be dispensed.

Barton, Wilfred M., asserts that animal experimentation has killed his confidence in sodium sulphate in the treatment of phenol poisoning.—J. Am. M. Ass. 1910, v. 55, p. 287.

Burke, Charles B., discusses carbolic acid poisoning, with report of a case.—N. York M. J. 1910, v. 92, p. 766.

The London Correspondent (J. Am. M. Ass. 1910, v. 55, p. 789) reports a fatal case of poisoning from the use of phenol as a dressing in a 2 year old girl at St. Thomas's Hospital.

See also Pharm. J. 1910, v. 31 (85), p. 261.

Darlington, Thomas F., cites, as an illustration of the good effect of proper drug ordinances, the fact that in 1906 the number of suicides from phenol, in the city of New York, fell from 343 to 36.—Boston M. & S. J. 1910, v. 162, p. 435.

Sloan, H. E., states that phenol in five per cent solution is an efficient germicide and in weaker solution retards and prevents bacterial growth.—Eclectic M. J. 1910, v. 70, pp. 231–234.

Reichel, Heinrich, in a contribution to the theory of disinfection, discusses the disinfecting action of phenols and the influence of various substances on the action of phenol.—Biochem. Ztschr. 1909, v. 22, pp. 149–230.

McClintic, Thomas B., discusses the use of carbolic acid as a disinfectant.—Public Health Bulletin No. 42, 1910, Washington 1911, pp. 19–21.

Hailer, E., reports a number of experiments to determine the increase in the disinfectant value of phenols by acids. He concludes that oxalic acid is most efficient.—Arb. a. d. k. Gsndhtsamte. 1909, v. 33, pp. 501–515.

Buckley, J. P., comments on the use of phenol in dental practice and presents several formulas.—Dental Cosmos, 1910, v. 52, pp. 429–437.

Coopernail, G. P., reports successful results in the treatment of herpes by applications of a 95 per cent solution of phenol.—J. Am. M. Ass. 1910, v. 55, p. 1998.

Hurt, L. M., reports observations on some effects of the internal administration of carbolic acid.—Am. Vet. Rev. 1910, v. 37, pp. 713–735.

Schieman, Hosias, advocates the use of carbolic acid injections in piles and goiter.—Med. Rec. 1910, v. 78, p. 1051.

Sollmann, Hanzlik and Pilcher discuss the inhibitory action of phenol on absorption of drugs. They conclude that the inhibitory effect is not due to toxic action on the epithelium, but to a specific slowing of the intestinal circulation.—J. Pharm. & Exper. Therap. 1909–10, v. 1, pp. 409–444.

Neuberg and Hildesheimer discuss the determination of phenols in the urine of animals.—Biochem. Ztschr. 1910, v. 28, pp. 525–528.

For additional references on the pharmacology and use of phenol see J. Am. M. Ass., and Index Medicus.

PHENOLPHTHALEIN.

Seely, A. H., recommends that phenolphthalein be included in the U. S. P., as it is now much prescribed by physicians.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 167. See also Hommell, Philemon, E., Merck's Rep. 1910, v. 19, p. 122.

Hunt, Reid, reports that phenolphthalein is included in the Ph. Germ.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

An editorial (Critic and Guide, 1910, v. 13, p. 173) points out that dihydroxyphthalophenone and paraphthalein are both synonyms of phenolphthalein, which is now well known as a laxative.

Zotier, V., presents a note on the volumetric assay of phenolphthalein.—Bull. Soc. chim. France, 1910, v. 7, p. 993.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 58) report that 4 samples of phenolphthalein had melting points between 252° and 255°.

Tyrode, Maurice Vejux, explains the purgative action of phenolphthalein.—Boston M. & S. J. 1910, v. 162, p. 176.

Koehler, Fritz C., reports that while 0.10 gm. of phenolphthalein had a distinctly laxative action under ordinary conditions and when the fæces reacted alkaline a much larger dose had no effect when the diet was regulated to produce an acid reaction of the fæces.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 52, p. 802.

Koldewijn, H. B., was unable to demonstrate the occurrence of phenolphthalein in the milk of animals to whom as high as 1 gm. of the drug was administered daily.—Arch. Pharm. 1910, v. 248, p. 639.

The editor of the Pharmacology Column (J. Am. M. Ass. 1910, v. 54, p. 1458) discusses the rise of phenolphthalein from a chemical indicator to a therapeutic agent and urges the importance of the physician's knowing what he is to use and why.

Gilbride, John J., presents a note on the clinical use of phenolphthalein.—J. Am. M. Ass. 1910, v. 54, p. 343.

Rowntree, L. G., discussing subcutaneous purgatives, presents a clinical study of phenoltetrachlorphthalein.—*Ibid.* pp. 344–348.

Rowntree and Geraghty report an experimental and clinical study of the functional activity of the kidneys by means of phenolsulphonephthalein.—J. Pharmacol. & Exper. Therap. 1909–10, v. 1, pp. 579–662. See also *Ibid.* 1910–11, v. 2, p. 393.

Rowntree, L. G., contributes a note concerning the laxative properties of the tribasic salts of phenolphthalic acid.—*Ibid.* 1910–11, v. 2, pp. 469–475.

Brady, William, notes that phenolphthalein is so very insoluble that the compressed tablets or wafers swallowed whole commonly fail to act; if well masticated the result is much more satisfactory.—N. York M. J. 1910, v. 91, p. 212.

PHENYLIS SALICYLAS.

Seidell, Atherton, reports experimental determinations on the solubility of phenyl salicylate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 0.01+ gm., and 100 gm. of U. S. P. alcohol will dissolve 21.51 gm. of phenyl salicylate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 69–71, 91.

Menge, George A., in a study of melting point determinations reports on 6 samples of phenyl salicylate which were found to melt at from 42.2° to 42.8°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, p. 92. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1043.

Eldred, Frank R., reports that twenty-four lots of phenyl salicylate varied in melting point from 40.5° to 43°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 897.

Wotring, R. J., reports a study of the liquefaction of mixtures of salol with other substances, and describes the proportions in which salol will readily liquefy with menthol, camphor, phenacetine, antipyrine, salicylic acid, thymol or chloral hydrate. With resorcinol, beta-naphthol, pyrogallol or sodium salicylate dry mixtures result.—Am. J. Pharm. 1910, v. 82, p. 241.

The editor of Dental Notes (Chem. & Drug. 1910, v. 77, p. 19) states that salol-chloroform may be prepared by mixing equal quantities of salol and chloroform. This has proven a valuable antiseptic in dental surgery.

Brady, William, states that phenyl salicylate (salol) tablets are therapeutically wrong. So insoluble is the drug when given in tablet form that it frequently may be found in the stools none the worse for the journey through the gastrointestinal tract. It should invariably be exhibited in capsules or powder, and from one to three hours after the meal time, in order that it may pass directly to the duodenum, where it is decomposed and absorbed.—N. York M. J. 1910, v. 91, p. 209.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 303–304) calls attention to a paper by Denarié (Semaine médicale, 1910, No. 47, p. 560) on the use of salol in the treatment of gastric ulcers.

PHOSPHORUS.

Baxter and Jones discuss the revision of the atomic weight of phosphorus and report their experimental work.—Ztschr. anorg. Chem. 1910, v. 66, pp. 97–121. Also J. Am. Chem. Soc. 1910, v. 32, pp. 298–318.

Nussbaum, reviews several recent articles on the chemistry of phosphorus.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 605–606.

Patch, Edgar L., again calls attention to the fact that phosphorus is not a practical ingredient for tablets, as it rapidly oxidizes and is lost. On the other hand, dispensed in a proper pill mass it remains unchanged for a long time.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 740.

Carlson, C. E. (Svensk Farm. Tidskr. 1910, No. 12, pp. 237–239) describes the preparation of phosphorated oil.—Apoth. Ztg. 1910, v. 25, p. 559.

Dohme and Engelhardt outline the Ph. Hung. III method for making phosphorated oil.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1188.

Frey, Otto, outlines a simple method for the determination of phosphorus in phosphorated oils.—Pharm. Post, 1910, v. 43, pp. 969–970.

Wolf and Österberg discuss the quantitative determination of sulphur and phosphorus in biological products.—Biochem. Ztschr. 1910, v. 29, pp. 429–438.

Moser, L., discusses the use of phosphorus and the combinations of phosphorus in the production of matches.—Oesterr. Chem.-Ztg. 1910, v. 13, pp. 172–177.

An editorial (J. Am. M. Ass. 1910, v. 54, p. 2046) discusses phosphorus poisoning in the match industry in the United States, calling attention to the work of John B. Andrews (Bull. Bureau of Labor, January, 1910, No. 86, p. 31). See also Oil, Paint and Drug Reporter, 1910, v. 77, May 16, p. 28D.

The annual report of the chief inspector of factories and workshops for the year 1909 notes one case of amorphous phosphorus poisoning, though phosphorus poisoning and phosphorus necrosis are almost things of the past. The sale of white phosphorus is not illegal until January 1st, 1911.—Brit. M. J. 1910, v. 2, p. 24.

Hann and Veale report a fatal case of poisoning by phosphorus, with unusual subcutaneous hæmorrhages.—Lancet 1910, v. 178, p. 163.

Rothmann, M. (Therap. Monatsh. 1910, v. 24, No. 11) reports a research which confirms the dangers of giving castor oil in case of acute phosphorus poisoning, as the phosphorus is thus rendered more soluble and larger amounts are absorbed.—J. Am. M. Ass. 1910, v. 55, p. 2277.

Czapski, A., discusses some of the recent contributions on the detection of phosphorus in cases of phosphorus poisoning in which oil of turpentine was administered as an antidote.—Ztschr. anal. Chem. 1910, v. 49, pp. 68–69.

Barton, Wilfred M., asserts that animal experimentation has killed his confidence in old oil of turpentine in the treatment of phosphorus poisoning.—J. Am. M. Ass. 1910, v. 55, p. 287.

Fornias, E., quotes Wassily who points out that phosphorus acts upon most organs, especially the arteries, the bones, and the lungs.—Hahnemann. Month. 1910, v. 45, p. 555.

Harbert, J. P., states that phosphorus has proven itself a very valuable remedy in diseases of the fundus, especially of the optic nerve. It is a powerful general stimulant, and nerve tonic. In eye affections which are secondary to great nervous exhaustion, it is one of our best agents.—Eclectic M. J. 1910, v. 70, p. 129.

Raue, C. Sigmund, discusses the pathogenetic action of phosphorus and its relations to the therapeutics of rickets.—Hahnemann. Month. 1910, v. 45, pp. 747–750.

PHYSOSTIGMA.

LaWall and Bradshaw report finding 2.8 per cent of ash in calabar bean.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Scoville, W. L., states that physostigma gives troublesome emulsions which can scarcely be avoided when the weak acid directed by the Pharmacopœia is used. A 10 per cent acid avoids this, and hydrochloric acid extracts the alkaloids more rapidly than sulphuric.—*Ibid.* p. 823.

Vanderkleed, Chas. E., reports 7 assays of calabar bean, lowest, 0.102, highest, 0.283 per cent physostigmine; 4 above and 3 below standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Dohme and Engelhardt report assays on 4 samples of fluid extract of calabar bean which showed a deterioration from 6 to 36 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 872.

Havenhill, L. D., outlines a formula for making the tincture of physostigma and suggests that this preparation should assay by the official process 0.014 gm. of physostigma alkaloids in each 100 cc.—*Ibid.* p. 790.

PHYSOSTIGMINÆ SULPHAS.

Rosenthaler and Görner in a report on the use of aromatic nitro derivatives as precipitants for alkaloids point out that trinitrothymol, trinitrophloroglucin and tetranitrophenolphthalein are more sensitive for physostigmine than is picric acid.—Ztschr. anal. Chem. 1910, v. 49. p. 349.

Schaefer, George L., recommends the use of 0.01 gm. physostigmine salicylate and 5 cc. of sulphuric acid as the proper proportion in applying the U. S. P. sulphuric acid test.—Am. J. Pharm. 1910, v. 82, p. 222.

Gaubert, F. (Compt. rend., Nov. 15, 1909, p. 852) calls attention to a body derived from physostigmine whose red fluorescence surpasses that of all known substances.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 371.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 30) report that a sample of eserine sulphate, apparently of extreme purity, was tested, which did not give the usual ammonia and nitric acid color reactions. It began to soften at about 136°, and melted at 142°–144°.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 284–286) calls attention to a number of contributions on the pharmacology and therapeutic use of physostigmine.

PHYTOLACCA.

LaWall and Bradshaw report finding 8.3 and 14.0 per cent ash in poke root.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Kebler, L. F., calls attention to phytolacca as an ingredient of a number of proprietaries, and states that when the manufacturers are given hearings and the worthlessness of the product is pointed out they reply that it is recognized in the Pharmacopœia and approved by the medical and pharmaceutical professions.—J. Am. M. Ass. 1910, v. 54, p. 410.

Felter, H. W., thinks that phytolacca is deserving of a prominent place among the winter remedies, and is to be selected where acute glandular enlargements are a dominant feature.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 206.

An unsigned abstract (Hom. Envoy) recommends phytolacca for sore throat, swallowing hurts, bones pain.—J. Am. Inst. Homœop. 1910, v. 2, p. 138.

Ellingwood, Finley, calls attention to the possible use of the juice expressed from the green leaves of the poke (*Phytolacca decandra*) in the treatment of epithelioma.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 157.

PILOCARPINÆ HYDROCHLORIDUM.

Eldred, Frank R., reports that fourteen lots of pilocarpine hydrochloride melted at temperatures from 194° to 199°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 897.

Elvove, Elias in a report of further studies in the application of the Volhard method to the estimation of alkaloids, calls attention to the possibilities of applying this method for the determination of pilocarpine.—J. Am. Chem. Soc. 1910, v. 32, p. 138.

Rosenthaler and Görner report observations on the use of aromatic nitroderivatives as precipitants for alkaloids and point out that for pilocarpine tetranitrophenolphthalein and hexanitrodiphenylamine are more sensitive than picric acid.—Ztschr. anal. Chem. 1910, v. 49, p. 350.

Schaefer, George L., recommends the use of 0.1 gm. pilocarpine hydrochloride and 5 cc. of sulphuric acid as the proper proportion in applying the U. S. P. sulphuric acid test.—Am. J. Pharm. 1910, v. 82, p. 222.

Mawas, J., discusses the action of pilocarpine on the secretion of the aqueous humor.—Compt. rend. Soc. Biol. 1910, v. 69, p. 521.

Butler, George F., asserts that pilocarpus contains two principles, pilocarpine and jaborine, and if jaborine is in excess, which it not infrequently is, the effect will be the opposite to the one expected. We use pilocarpus for its diaphoretic action, but if a fluid extract of jaborandi containing an excess of jaborine is used we get an effect similar to that which would be produced by atropine. If pilocarpine were used there would be no uncertainty.—N. York M. J. 1910, v. 92, p. 953.

Osborne, Oliver T., states that pilocarpine has been found more and more dangerous on account of the profuse secretion which it causes in the bronchial tubes. If needed the hydrochloride is the best preparation and it should be administered hypodermatically.—J. Am. M. Ass. 1910, v. 54, p. 376.

Henderson and Taylor find that pilocarpine stimulates the bronchial glands peripherally.—J. Pharmacol. & Exper. Therap. 1910-11, v. 2, p. 160.

PILOCARPINÆ NITRAS.

Osborne, Oliver T., considers pilocarpine nitrate superfluous.—J. Am. M. Ass. 1910, v. 54, p. 376.

Eldred, Frank R., reports that five lots of pilocarpine nitrate melted at temperatures from 167° to 172°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 897.

Schaefer, George L., recommends the use of 0.01 gm. pilocarpine nitrate and 5 cc. of sulphuric acid as the proper proportion in applying the U. S. P. sulphuric acid test.—Am. J. Pharm. 1910, v. 82, p. 222.

PILOCARPUS.

Tunmann, O., states that jaborandi was introduced from South America in 1873 by Coutinho, and reaches the European market now from Brazilian ports, though some is shipped from Paraguay and Argentine. He discusses the probable origin of the several varieties of pilocarpus and states that the accessions are irregular and the drug is frequently adulterated.—Apoth. Ztg. 1910, v. 25, p. 706.

LaWall and Bradshaw report finding 4.8 per cent ash in jaborandi.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Tunmann and Jenzer report a pharmacognostic study of *Pilocarpus. pennatifolius* Lem.—Arch. Pharm. 1910, v. 248, pp. 514–519. Also Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 17–21.

Rusby, H. H., states that jaborandi leaves, formerly of spurious varieties four times out of five, are now almost always genuine, but the attempts to market the spurious ones continued long after the facts were known to those so engaged.—Practical Druggist, 1910, v. 27, p. 424.

Reum, Arthur W., reports that in commercial pilocarpus one may expect to find approximately 89.8 per cent of leaves, and 10.2 per cent of stems.—Pacific Pharmacist, 1909–10, v. 4, p. 456.

Engelhardt, Hermann, reports that the quality of jaborandi was excellent. He received samples and shipments with as much as 1 per cent of total alkaloids.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1258.

Beilstein, Christian, reports that one lot of *Pilocarpus jaborandi* was offered. While this is one of the official species, it is almost worthless on account of its low alkaloidal content.—Proc. N. W. D. A. 1910, p. 105.

Eldred, Frank R., asserts that only the *Pilocarpus microphyllus* has a high enough alkaloidal content to meet the official requirement; 9 lots of this species were found to contain from 0.78 to 1.23 per cent of alkaloids. Three lots of *P. jaborandi* assayed: 0.15 per cent, 0.35 per cent, and 0.13 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 897.

Wiley, H. W., reports that with the exception of one sample of jaborandi, consisting of a false variety, all the jaborandi has been of excellent quality, assaying about 0.75 per cent, which exceeds the U. S. P. requirement.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

Holmes, E. M., describes a new substitute for jaborandi leaves, which he has traced to the genus *Casearia*, of the N. O. Smydaceæ, species as yet undetermined. The leaves have no distinctive taste.—Pharm. J. 1910, v. 30 (84), p. 52.

Scoville, W. L., states that the U. S. P. assay for pilocarpus is quite satisfactory. The amount of fluid extract used for assay should be doubled, and the alkaloids from 10 cc. obtained for the final titration.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 823.

Caesar & Loretz (Jahres-Ber. 1910, pp. 96–98) outline the Keller-Fromme method for the assay of jaborandi and point out that only the U. S. P. VIII prescribes an assay for this drug.

Rippetoe, John R., thinks that the assay process for the fluid extract of pilocarpus is needlessly complicated, since, as satisfactory results can be obtained by extracting 10 cc. of the fluid extract directly with chloroform, after the addition of 2 cc. ammonia water, and continuing as under the U. S. P. process.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1062.

Scoville, W. L., reports that fluid extract of pilocarpus on keeping shows a slight deterioration, and also a marked precipitation.—*Ibid.* p. 883.

Sayre, L. E., reports on 1 sample of fluid extract of jaborandi: illegal.—*Ibid.* p. 1097.

Osborne, Oliver T., thinks that as pilocarpine represents the activity of pilocarpus, the fluid extract seems not to be needed.—J. Am. M. Ass. 1910, v. 54, p. 376.

Monroe, A. Leight, quotes Newberry, who discusses the symptomatology of jaborandi and states that the symptoms closely simulate spasm or irritability of the ciliary muscle and suggests that jaborandi be always thought of in cases of eye strain.—Hahnemann. Month. 1910, v. 45, p. 150.

Leming, W., outlines the specific indications for pilocarpus as: acute toxæmias from retention of bodily excretions or introduction of external agents, with strong pulse, dry skin, evidences of congestion and convulsive tendencies.—Eclectic M. J. 1910, v. 70, pp. 280–281.

Harbert, J. P., states that jaborandi is prescribed internally with success in some cases of spasm of the ciliary muscle. In irritable states of this muscle, accompanied by more or less vertigo with nausea and vomiting, it affords relief. It has likewise been successfully used in some cases of periodic strabismus.—*Ibid.* p. 71.

PILULÆ.

An editorial (Chem. & Drug. 1910, v. 76, p. 48) cites the fact that the Ph. Brit. contains formulas for 20, the Ph. Fr., 15, the U. S. P., 14 and the Ph. Germ., 4 only. From trades catalogues, etc., it estimates that in round numbers 2,500 represents the kinds in demand in different places daily, or at different seasons of the year.

Kebler, Lyman F., reports the opinion that formulas and general directions for making pills should be included in the National Formulary.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 147.

Kalusowski, H. E., thinks it would be an unfortunate step to delete the directions for coating pills from the National Formulary.—*Ibid.* p. 13.

The City of Washington Branch of the A. Ph. A. recommends that the general direction for making and coating pills be continued in the National Formulary, if it is found practicable to present the matter in a satisfactory form.—*Ibid.* p. 210.

The Pharmaceutical Journal (1910, v. 30 (84), pp. 399–424) Chapters in Practical Pharmacy give directions for making and coating pills.

An editorial (Bull. Am. Pharm. Ass. 1910, v. 5, p. 6) asserts that ferric oxide or "paint" which the manufacturers use in the production of so-called chocolate-coated pills and tablets having been proved fraudulent is now passing out of use.

Dohme and Engelhardt state that the Ph. Hung. III directs that pills for internal use should have a weight from .1 to .3 gm. and when cut in half and shaken with luke-warm water should disintegrate or dissolve within a short time.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1189–1190.

Thain, L. L., thinks the Ph. Brit. pill list might well be revised and many of them replaced by keratin covered powdered drugs.—Lancet, 1910, v. 179, p. 1306.

Brady, William, comments on the inertness of factory made pills of uncertain age.—N. York M. J. 1910, v. 91, p. 210.

The Executive Committee of the British Pharmaceutical Conference expresses the belief that a systematic investigation is required of the time necessary for the solution or disintegration of pills prepared with different excipients and kept for various periods of time.—Year-Book of Pharmacy, 1910, p. 297.

PILULÆ CATHARTICA COMPOSITÆ.

Osborne, Oliver T., thinks the compound cathartic pill, containing as it does, six cathartics is a left-over, old, hereditary composition. This pill, however, is strongly favored by many surgeons and some internists, but it is very true and easily proved that a proper dose of other simpler cathartics would act as well.—J. Am. M. Ass. 1910, v. 54, p. 291.

Brady, William, asserts that the combination of calomel and jalap in the official compound cathartic pill is futile, because if the latter acts at all it will sweep out the former before it has time to act.—N. York M. J. 1910, v. 91, p. 212.

PILULÆ CATHARTICA VEGETABILES.

Osborne, Oliver T., thinks that the vegetable compound cathartic pill is not needed.—J. Am. M. Ass. 1910, v. 54, p. 291.

PILULÆ FERRI CARBONATIS.

LaWall, Charles H., asserts that the requirements for a minimum percentage of ferrous carbonate in pills of ferrous carbonate are just as important as in the case of ferri carbonas saccharatus. Theoretically 21.73 per cent by weight of ferrous carbonate is present. Practically it never is found to be below 20 per cent, nor should a lower amount than this be permitted.—Am. J. Pharm. 1910, v. 82, p. 25.

Dohme and Engelhardt outline the Ph. Hung. III formula for Blaud's pills.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1190.

Sayre, L. E., reports on 2 samples of ferruginous pills: 1 passed; 1 illegal.—*Ibid.* p. 1096.

Brady, William, asserts that "Blaud" pills are quite apt to pass in the stools as good as new. The U. S. P. preparation made fresh on prescription furnishes nascent iron over a limited period of about 10 days. After this it leaves an inert mass of hard ferric carbonate which, as far as solubility is concerned, might as well be pig iron. The commercial product, having a rubber gum base and retaining its putty-like softness forever, he thinks no more soluble than rubber gum and should deceive no one.—N. York M. J. 1910, v. 91, p. 210.

PIMENTA.

LaWall and Bradshaw report finding from 3.3 to 4.25 per cent ash in pimenta.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Dreher, Julius D., reports for the six months ending September 30, 1910, that out of a total of 4,921,168 pounds of allspice exported from Jamaica, 1,679,888 pounds went to the United States.—Cons. & Tr. Rep. 1910, p. 1085.

PIPER.

LaWall and Bradshaw report finding from 4.8 to 7.3 per cent ash in black pepper.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

DuBois, James T., reports that for the first nine months of 1910, the Straits Settlements exported a total of 10,397 tons of black pepper, of which 2,634 tons went to the United States, a decrease of 4,292 tons. The exports of white pepper amounted to a total of 4,319 tons, 1,324 to the United States.—Cons. & Tr. Rep. 1910, p. 1164.

Collin, Eugène, discusses pepper and its adulterations, and presents a number of illustrations showing the appearance of pepper, and of some adulterants that are used, under the microscope.—Ann. Falsif. 1910, v. 3, pp. 272–283.

Hill, Edward C., reports a sample of ground black pepper adulterated, an excess of pepper shells.—Bull. Colorado Bd. Health, 1910, v. 10, No. 2, p. 7.

Jaffa, M. E., reports the examination of 1 sample of white pepper; illegal.—Bull. California Bd. Health, 1910, v. 5, p. 199.

McGill, A. (Lab. Inl. Rev. Dept. Canada Bul. 203, pp. 31) reports collecting a large number of samples of both black and white pepper in Canada. Of 140 samples of black pepper 100 were found to be genuine, 15 doubtful, and 25 adulterated. Of an equal number of samples of white pepper, 104 were genuine, 11 doubtful, and 24 adulterated, 1 sample being lost.—Exper. Sta. Rec. 1910, v. 23, p. 567.

PIPERINA.

Menge, George A., in a study of melting point determinations reports on 4 samples of piperine which were found to melt at from 127.4° to 129.5°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, p. 93. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1043.

Schaefer, George L., recommends the use of 0.1 gm. piperine and 10 cc. of sulphuric acid as the proper proportion in applying the U. S. P. sulphuric acid test.—Proc. Am. J. Pharm. 1910, v. 82, p. 222.

Eldred, Frank R., reports that four lots of piperine were found to have melting points of 128° to 129°. The melting point is given in "Beilstein" as 128° to 129.5°.—Am. Pharm. Ass. 1910, v. 58, p. 897.

PIX LIQUIDA.

Riedel's Berichte (1910, p. xxix) asserts that even genuine wood tar is not always fully soluble in absolute alcohol.

Mittelbach, Wm., reports that ointment of tar is all right providing it is made up fresh when dispensed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 792.

PLUMBI ACETAS.

Seidell and Wilbert discuss the purity rubric of the U. S. P. for lead acetate, and suggest the addition of a method of assay.—Am. J. Pharm, 1910, v. 82, p. 66.

Seidell, Atherton, reports experimental determinations on the solubility of lead acetate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 72.5 gm., and 100 gm. of U. S. P. alcohol will dissolve 1.1 gm. of lead acetate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 15–17, 91.

Rupp, E. (Chem. Ztg. 1910, p. 121) outlines volumetric methods for the determination of zinc and lead.—Apoth. Ztg. 1910, v. 25, p. 137.

Hansen, William C., presents the reports of several of the State inspectors of health with reference to the incidence of lead poisoning together with a suggested notice of precautions to be observed by employees and employers.—Rep. Massachusetts Bd. Health, 1910, pp. 521–531.

An editorial (Brit. M. J. 1910, v. 2, p. 1984) states that in volume III of the Reports of the Departmental Lead Committee is collected information upon plumbism from medical men and technical chemists, factory inspectors, manufacturers and practical potters, which make this part of the report a valuable contribution to the literature of industrial lead poisoning.

Maurel, E., enlarges upon the Bernard theory as to the action of toxic and medicinal substances and asserts that, in the case of lead acetate both as to sensitivity and toxicity, the order in which the tissues are affected is as follows: red corpuscles, smooth fiber, sensory nerve, motor nerve, striated fiber, cardiac fiber and leucocyte.—Compt. rend. Soc. Biol. 1910, v. 68, p. 1046; v. 69, p. 5.

Prendergast, W. Dowling, makes a contribution to the classification of the symptoms of lead poisoning.—Brit. M. J. 1910, v. 1, pp. 1164–1166. See also p. 1324.

Fantus, B. (Illinois M. J., May 1910) discusses the diagnosis and treatment of plumbism.—J. Am. M. Ass. 1910, v. 54, p. 1903.

Stevens, G. Arbour, reports 5 cases of plumbism successfully treated by the internal administration of calcium permanganate.—Brit. M. J. 1910, v. 1, p. 1166.

Koldewijn, H. B., reviews the literature relating to the elimination of lead in the milk of animals, and reports experiments with cows and goats, from which he concludes that, after the continued administration of lead acetate, lead is found in the milk, although in comparatively minute quantities.—Arch. Pharm. 1910, v. 248, pp. 626–628.

Osborne, Oliver T., thinks that lead should not be used at all internally.—J. Am. M. Ass. 1910, v. 54, p. 208.

For additional references on the chemistry and toxicology of lead see Chem. Abstr., Brit. M. J., and Index Medicus.

PLUMBI IODIDUM.

Osborne, Oliver T., thinks that lead iodide should be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 208.

PLUMBI NITRAS.

Osborne, Oliver T., thinks that lead nitrate should be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 208.

PLUMBI OXIDUM.

Milbauer, Jaroslav, reports the results of a physical, chemical and technical study of litharge.—Chem. Ztg. 1910, v. 34, pp. 138–140.

Scoville, W. L., says that litharge often contains small quantities of red lead.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 744.

Osborne, Oliver T., thinks that lead oxide should be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 208.

PODOPHYLLUM.

LaWall and Bradshaw report finding 3.6 per cent ash in podophyllum.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

The Executive Committee of the British Pharmaceutical Conference asks if podophyllum, now official in the B. P. Addendum as a source of resin for use in India and the Colonies, should not also be included in the next edition of the ordinary British Pharmacopœia.—Year-Book of Pharmacy, 1910, p. 295.

Bernegau, L. H., reports that taking 4 per cent resin as a standard for good rhizome, only two samples of podophyllum met this requirement during the past year. There is no U. S. P. standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 144.

Rippetoe, John R., thinks that the fluid extract of podophyllum should have a resin standard and assay process for determining the same. A chloroformic extract standard would probably be the most practicable.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1062.

Brady, William, notes that podophyllum acts in 10 to 12 hours. It is suitable for use at bed time.—N. York M. J. 1910, v. 91, p. 212.

Yeager, Wm. H., states that podophyllum affects chiefly the duodenum, liver and rectum, and becomes a very valuable remedy for the milder diarrhœas of infants.—Hahnemann. Month. 1910, v. 45, p. 370.

See also under Resina Podophylli.

POTASSII ACETAS.

Bachman, G., reports that the potassium acetate examined showed a minimum percentage of 95.7, a maximum of 98.2.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

The Committee of Reference in Pharmacy think that the lead present in potassium acetate should not exceed 10 parts per million.—Brit. & Col. Drug. 1910, v. 58, p. 29.

Seidell, Atherton, reports experimental determinations on the solubility of potassium acetate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 219.6 gm. and 100 gm. of U. S. P. alcohol will dissolve 43.9 gm. of potassium acetate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 18–19, 91.

POTASSII BICARBONAS.

The Committee of Reference in Pharmacy recommends that the lead present in potassium bicarbonate should not exceed 5 parts per million.—Brit. & Col. Drug. 1910, v. 58, p. 29.

Dohme and Engelhardt state that the Ph. Hung. III directs that 5 gm. of potassium bicarbonate heated in a crucible should leave 3.44 to 3.45 gm. of residue.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1185.

Bachman, G., reports that the potassium carbonate examined showed a minimum percentage of 98.6, a maximum of 99.19.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Eldred, Frank R., reports that potassium bicarbonate was found to vary from 98 per cent to 99.9 per cent, most lots being between 98.5 per cent to 99.5 per cent; one lot was found to be only 96 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 897.

Whitney, D. V., reports that of three samples of potassium bicarbonate examined, the crystals of one were irregular, had considerable color, contained excess of carbonate and heavy metals.—Proc. Missouri Pharm. Ass. 1910, p. 107.

POTASSII BITARTRAS.

An editorial (Pharm. J. 1910, v. 31 (85), p. 512) attributes the advance in the value of cream of tartar to the very serious deficiency in the wine crop both in France and Italy and in a certain portion of Spain.

Seidell, Atherton, reports experimental determinations on the solubility of potassium bitartrate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 0.654 gm., and 100 gm. of U. S. P. alcohol will dissolve 0.014 gm. of potassium bitartrate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 82–84; 91.

Lichthardt, G. H. P., asserts that as a standard for making volumetric solutions, potassium bitartrate is not likely to yield good results in the hands of every worker; he prefers to use a freshly prepared sodium carbonate, made by heating a quantity of the bicarbonate.—Pacific Pharmacist, 1909–10, v. 4, p. 87.

Graham, Horn and Rosengarten think that potassium bitartrate as the basis for alkalimetry and acidimetry is now generally being replaced for good reasons by sodium oxalate, potassium tetroxalate, oxalic acid or constant boiling hydrochloric acid.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 972.

Bachman, G., reports that the potassium bitartrate examined showed a minimum percentage of 95.71, a maximum of 98.6.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Table showing some of the analytical results reported for potassium bitartrate.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Massachusetts State Board of Health.	4	2	Proc. Am. Pharm. Ass. 1910, v. 58, p. 743.
Lythgoe, Hermann C.	16	4	Rep. Massachusetts Bd. Health, 1910, p. 356.
Howard, Charles D.	6	1	Rep. New Hampshire Bd. Health 1910, v. 21, p. 175.
Sayre, L. E.	2	1	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.
McGill, A.	211	50	Lab. Inland Revenue Dept., Ottawa, Bull. 195.
Local Government Board	245	11	Pharm. J. 1910, v. 30 (84), p. 33.
Local Government Board (Scotland).	108	4	*Ibid.* v. 31 (85), p. 65.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 29) again report a very favorable experience with cream of tartar; 9 samples have been examined and in all cases the amount of real bitartrate present was well in excess of official requirements. Lead varied from 1 to 6 parts per million, and except in 1 instance, where 2 parts per million were present, samples were practically arsenic-free.

POTASSII BROMIDUM.

Dohme and Engelhardt outline the Ph. Hung. III test for the purity of potassium bromide.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1185.

The Committee of Reference in Pharmacy recommends that the lead present in potassium bromide should not exceed 10 parts per million.—Brit. & Col. Drug. 1910, v. 58, p. 29.

Patch, Edgar L., points out that the necessity for the examination of products made by the best houses is seen in the fact that a lot of potassium bromide was distributed assaying only 47.05 per cent of potassium bromide, while it contained in addition 47.04 per cent sodium bromide and 5.91 per cent sodium chloride.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 740. See also Beal, George D., Proc. Ohio Pharm. Ass. 1910, p. 71.

Bachman, G., reports that the potassium bromide examined showed a minimum percentage of 93.3, a maximum of 96.1.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Sayre, L. E., reports on 12 samples of potassium bromide: 11 passed; 1 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 61) report that the purity of potassium bromide ranged from 99.3 to 99.8 per cent of KBr. Potassium chloride being either absent or present only up to 0.7 per cent.

An editorial (Lancet, 1910, v. 179, p. 575), commenting on the relation of rate of elimination to maximum daily dose, remarks that potassium bromide is eliminated from the body very slowly, and when administered day after day it tends to accumulate in the body, producing untoward results.

Brady, William, asserts that bromides which are absorbed and eliminated slowly, should be given once daily and when long continued should be omitted for a few days in every month; they are best given in milk, after meals.—N. York M. J. 1910, v. 91, p. 212.

Poyaud has confirmed, in a thesis for the doctorate in medicine (Bordeaux, May, 1910), the results obtained by Pouchet on the increase of urinary acidity after ingestion of potassium bromide.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, p. 235.

Monroe, A. Leight, quotes Walter Joel Brown who recommends kali brom in the treatment of acne on face, neck and shoulders, with peculiar yellow points which neither coalesce nor burst.—Hahnemann. Month. 1910, v. 45, p. 717.

POTASSII CARBONAS.

The Committee of Reference in Pharmacy recommends that the lead present in potassium carbonate should not exceed 5 parts per million.—Brit. & Col. Drug. 1910, v. 58, p. 29.

Dohme and Englehardt outline the Ph. Hung. III test to determine the purity of pure potassium carbonate.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1185.

Bachman, G., reports that the potassium carbonate examined showed a minimum percentage of 95.5 and a maximum of 97.87.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Sayre, L. E., reports on 2 samples of salt of tartar (potassium carbonate): 1 passed; 1 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.

Biernacki, E., discusses our present knowledge of the pathology and physiology of potassium salts.—Zentrlbl. Physiol. u. Path. d. Stffwchsls, 1910, v. 5, pp. 401–408.

Fornias, E., quotes Wassily who points out that kali carbonicum acts upon the blood, heart, and mucous membranes.—Hahnemann. Month. 1910, v. 45, p. 553.

Monroe, A. Leight, quotes Stephenson, who states that kali carb cured his wife of threatened phthisis, profuse night sweats, loss of flesh, a tickling cough of a severely paroxysmal character, loss of appetite and strength.—Hahnemann. Month. 1910, v. 45, p. 154.

POTASSII CHLORAS.

The Committee of Reference in Pharmacy recommends that the lead present in potassium chlorate should not exceed 10 parts per million.—Brit. & Col. Drug. 1910, v. 58, p. 29.

Gilmour, J. P., remarks that he has never found that a solution of potassium chlorate in water in the proportion of 1:16 remained dissolved. In Glasgow at least a solution of 1 in 20 frequently crystallizes.—Pharm. J. 1910, v. 30 (84), p. 406.

Dohme and Englehardt state that in the Ph. Hung. III the test for nitrates in potassium chlorate is directed to be made with zinc and iron and not with aluminum, as directed in U. S. P.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1185.

Eldred, Frank R., reports that potassium chlorate, on account of the practice of shipping in barrels and kegs, frequently contains particles of wood and paper fiber which might make the manufacture of tablets somewhat dangerous. One lot was shipped in kegs which had been charred on the inside; they were carelessly lined with paper, and the chlorate contained many particles of charcoal and partially charred wood.—*Ibid.* p. 897.

Heller, A. (Münch. med. Wchnschr. 1909, v. 56, No. 47) says that necropsy of a number of children who have been treated with potassium chlorate revealed the blood so brown, especially in the lungs and skull, that the question arose in his mind whether the potassium chlorate might not have been responsible for the fatality.—J. Am. M. Ass. 1910, v. 54, p. 170.

Wooldridge, Frederick V., asserts that in the toxæmia of pregnancy, when the urinary findings show that some, as yet unknown, irritant is beginning to destroy the active elements in the liver and kidney, kali chloricum is one of the leading remedies to help control the condition. The findings on animals and man show that it does produce nephritis and probable liver changes.—J. Am. Inst. Homeœp. 1910, v. 2, p. 44.

POTASSII CITRAS.

The Committee of Reference in Pharmacy recommends that the lead present in potassium citrate should not exceed 10 parts per million.—Brit. & Col. Drug. 1910, v. 58, p. 29.

Seidell, Atherton, reports experimental determinations on the solubility of potassium citrate in aqueous alcohol. He finds that at 25°, 100 gm. of water will dissolve 181.8 gm., and 100 gm. of U. S. P. alcohol will dissolve 0.01+ gm. of potassium citrate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, p. 41, 91.

Sayre, L. E., reports on 1 sample of potassium citrate: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.

POTASSII CYANIDUM.

Brittain, Joseph L., reports on the production of potassium cyanide from thick molasses, a by-product from beet sugar factories, after the alcohol is produced from it; there are several more by-products of commercial value after producing the cyanide.—Cons. & Tr. Rep. June 11, 1910, p. 700.

POTASSII DICHROMAS.

Frankforter, Roehrich and Manuel report observations on the reaction between ammonium chloride and potassium dichromate when heated.—J. Am. Chem. Soc. 1910, v. 32, pp. 178–184.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 61) report that the purity of 4 samples of potassium bichromate ranged from 99.2 to 99.8 per cent potassium bichromate.

Tombleson, James B., reports 6 cases of phthisis treated by the internal administration of potassium bichromate.—Lancet, 1910, v. 179, p. 1484.

Monroe, A. Leight, quotes Dean W. Myers, who states that kali bichromicum is of great value and especially indicated in mild cases of croupous conjunctivitis in which the false membrane is loosely adherent and easily detached.—Hahnemann. Month. 1910, v. 45, p. 469.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 286-287) reviews communications by Kobert and others on the internal administration of chromates. Kobert believes that the continued use of chromates may cause chronic poisoning.

For references on the toxic action of potassium dichromate see Index Medicus.

POTASSII ET SODII TARTRAS.

Soenen, Maurice, in his "Pharmacy at La Rochelle before 1803," states that Elie Seignette (1632–1698) was the inventor of the well-known Rochelle salts.—Chem. & Drug. 1910, v. 77, p. 611.

Seidell, Atherton, reports experimental determinations on the solubility of potassium sodium tartrate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 114.2 gm. of potassium sodium tartrate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 84–86, 91.

Woolsey, J. F., reports that, as usually found, the potassium and sodium tartrate on the market is not pure and will not yield clear aqueous solutions. As in the case of "Epsom Salts," the concentrated aqueous solutions will amply afford evidence of the quality.—Proc. Pennsylvania Farm. Ass. 1910, p. 145.

POTASSII HYDROXIDUM.

v. Lippmann, Edmund O., presents a contribution to the history of potash and of the name.—Chem. Ztg. 1910, v. 34, pp. 1217–1219; 1226–1228; 1235–1237.

Thompson, Robert J., discusses Germany's potash deposits and mines, giving some account of the geological history of deposits and the formation of limestone.—Cons. & Tr. Rep. 1910, Nov. 25, pp. 729–733.

Dohme and Engelhardt state that the Ph. Hung. III requires that potassium hydroxide contain 80 per cent of absolute potassium hydroxide.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1186.

Derlin, L., discusses the Ph. Germ. requirements for potassium hydroxide and suggests an elaboration of the tests for this substance.—Apoth. Ztg. 1910, v. 25, p. 392.

Roemer, H., discusses methods of analysis of the potash salts and the estimation of the various constituents of these salts.—Chem. Eng. 1910, v. 11, pp. 80–84.

Bachman, G., reports that the potassium hydroxide examined showed a minimum percentage of 83.8, a maximum of 85.37.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Brown, Linwood A., points out that potassium hydroxide is extremely deliquescent, absorbs CO_2 with avidity, and should be kept in bottles made of hard glass, to prevent the action of the alkali on the glass. The cork should be sealed over with a layer of paraffin, and each time the bottle is opened, should be resealed by means of a hot spatula.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, pp. 142–143.

LaWall, Charles H., asserts that absence of more than traces of potassium carbonate should be insisted upon in solution of potassium hydroxide, which undergoes a deterioration of this kind quite readily. A proper method for filtration should also be given, in consequence of the frequent necessity for removing flakes of siliceous matter which are often found floating in the liquid.—Am. J. Pharm. 1910, v. 82, p. 24.

Gaze, R., discusses the reasons for the development of the yellow color in alcoholic solutions of potassium hydroxide.—Apoth. Ztg. 1910, v. 25, pp. 668–669.

POTASSII HYPOPHOSPHIS.

Dohme and Englehardt state that the Ph. Hung. III requires that potassium hypophosphite contain 90 per cent of absolute potassium hypophosphite.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1186.

POTASSII IODIDUM.

Seidell and Wilbert discuss the pharmacopœial requirements for potassium iodide and suggest a method of assay.—Am. J. Pharm. 1910, v. 82, p. 65.

Dohme and Engelhardt outline the Ph. Hung. III purity test for potassium iodide.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1186.

Tyrer, Dan, reports observations on the solubility of potassium iodide in liquid methyl alcohol from ordinary temperatures to the critical point.—J. Chem. Soc., Lond., 1910, v. 97, pp. 629–632.

Parsons and Corliss report observations on the equilibrium in the system: potassium iodide, iodine and aqueous alcohol. They conclude that no polyiodides of potassium exist as solid phases at 25°.—J. Am. Chem. Soc. 1910, v. 32, pp. 1367–1378.

Bachman, G., reports that the potassium iodide examined showed a minimum percentage of 97.46, a maximum of 98.84.—Proc. Minnesota Pharm. Ass. 1910, P. 63.

Whitney, D. V., reports examining 3 samples of potassium iodide; contained iodate.—Proc. Missouri Pharm. Ass. 1910, p. 107.

Sayre, L. E., reports on 1 sample of potassium iodide: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.

An editorial (Chem. & Drug. 1910, v. 77, p. 832) on progress in pharmacology calls attention to a recent paper by Fortescue-Brickdale on the comparative therapeutic value of the organic and inorganic compounds of certain elementary bodies, and gives the figures with reference to the halogens.

Brady, William, notes that iodides, which are absorbed and eliminated rapidly, should be given every four hours at first to the point of tolerance; some of the iodide accumulates in the body, in organic combination with cell proteids, consequently, when the point of tolerance is reached the drug should be entirely cut off for a few days, then continued in considerably reduced doses given once or twice a day. Iodides are best given in milk about an hour after meals. After prolonged use, all trace of iodine disappears from the urine within 5 days from the last dose.—N. York M. J. 1910, v. 91, p. 212.

Knowles, Frank Crozer, presents a paper on purpura caused by the ingestion of the iodides, with a report of cases and bibliography. He pleads for smaller doses.—J. Am. M. Ass. 1910, v. 55, pp. 100–105.

Bridges, W. O., believes that in several cases the iodides have converted simple goiter into exophthalmic goiter.—*Ibid.* p. 1574.

Harbert, J. P., states that potassium iodide is one of the most valuable remedies for destroying morbid materials in the fluids of the body. Hence, it is one of the best agents ophthalmologists have recourse to in the treatment of certain eye diseases which are dependent on syphilis and scrofula.—Eclectic M. J. 1910, v. 70, p. 130.

POTASSII NITRAS.

Riedel's Berichte (1910, p. xxviii) suggests that traces of chlorides be permitted in potassium nitrate.

Paal and Ganghofer report observations on the determination of potassium nitrate in meats by means of nitron.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 19, pp. 322–328.

POTASSII PERMANGANAS.

Dohme and Engelhardt state that in the Ph. Hung. III the purity of potassium permanganate is determined by the iodometric method and should be 99.5 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1186.

Brand and Ramsbottom report observations on the electro-chemical conversion of manganates into permanganates.—J. prakt. Chem. 1910, v. 82, pp. 336–396.

Askenasy and Klonowski (Z. Elektrochem. 1910, 16, 170–176) discuss the electrolytic production of potassium permanganate from potassium manganate solutions.—J. Soc. Chem. Ind. 1910, v. 29, p. 348.

Bray, W. C., presents a preliminary note on a source of error in permanganate determinations.—J. Am. Chem. Soc. 1911, v. 32, pp. 1204–1207.

Poppe, Edmond, reports observations on the oxidation of organic compounds by means of potassium permanganate.—Bull. Soc. chim. Belg. 1910, v. 24, pp. 237–239.

Brown, Linwood A., states that potassium permanganate is of such an unstable nature that a word of caution as to the handling of it should be unnecessary. When in concentrated solution, or in the dry condition, it should not be brought in contact with organic or other readily oxidizable substances.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 143.

Sarkar and Dutta present an explanation for the apparently unlimited reducing action of organic substances on potassium permanganate.—Ztschr. anorg. Chem. 1910, v. 67, pp. 225–233. See also article by Skrabal, *Ibid.* v. 68, pp. 48–56.

McClintic, Thomas B., discusses the use of potassium permanganate as a disinfectant.—Public Health Bulletin No. 42, 1910, Washington, 1911, p. 21.

Rogers, Leonard, discusses the use of potassium permanganate in the treatment of cholera.—Brit. M. J. 1910, v. 2, p. 837.

"R. V. G." discusses a new process for the sterilization of water by potassium permanganate (Union pharm.) and the suggestion of Debuchy that resorcin be used as a reducing agent.—J. pharm. Anvers, 1910, v. 66, p. 737.

Levaditi and Landsteiner assert that potassium permanganate may be employed as an antiseptic in the prophylaxis of acute epidemic poliomyelitis.—Compt. rend. Soc. Biol. 1910, v. 68, p. 741.

The Indian Correspondent (Lancet, 1910, v. 179, p. 342) reports experiments carried on in the Government bacteriological laboratory at Bombay which show conclusively that the intravenous injection of potassium permanganate as an antidote for snake poison is attended with great danger. Brunton's method of local application remains the one method generally applicable which has in its favor both a scientific experimental basis and a record of remarkable success in practice.

Adams, F. X., considers "potassa permanganas" one of our best all around remedies locally and the least studied, consequently the least understood remedy we have of the alkaline group. It is one of the best antiseptics locally applied we have.—Eclectic M. J. 1910, v. 70, p. 72.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 287–289) reviews several communications on the use of potassium permanganate as an antiseptic and as a reagent.

POTASSII SULPHAS.

Fox and Gauge report observations on the solubility of potassium sulphate in concentrated aqueous solutions of non-electrolytes.—J. Chem. Soc., Lond., 1910, v. 97, pp. 377–385.

Adams, F. X., has used kali sulph in the following conditions: bronchitis, with greenish-yellow expectorations; bronchitis with yellow, watery, mattery, profuse expectorations; catarrh of head, with a discharge of greenish-yellow mucus.—Eclectic M. J. 1910, v. 70, pp. 76–77.

PRUNUS VIRGINIANA.

LaWall and Bradshaw report finding 3.4 per cent ash in wild cherry bark.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Finnemore, Horace, reports a chemical examination of a species of prunus, a substitute for the official *Prunus serotina*.—Pharm. J. 1910, v. 31 (85), p. 580. For full text see *Ibid.* 604–607.

Power and Moore report experimental work to determine the constituents of the leaves of *P. serotina* Ehrhart.—J. Chem. Soc., Lond., 1910, v. 97, pp. 1099–1112.

Burbage, Landon W., presents in abstract a thesis on fluid extract of wild cherry.—Proc. Virginia Pharm. Ass. 1910, p. 75.

Osborne, Oliver T., thinks there is no use for the fluid extract of wild cherry.—J. Am. M. Ass. 1910, v. 54, p. 467.

Thome, E. R., asserts that the present formula for syrup of wild cherry yields a sickly-yellow colored syrup as against a bright red in the 1890 formula. The profession invariably prefers the latter.—Practical Druggist, 1910, v. 28, p. 123.

Dunning, H. A. B., compares several formulas for syrup of wild cherry, and recommends that the Committee of Revision consider the advisability of substituting the 1890 formula for the 1900 without change.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 524.

Beringer, George M., thinks that the present formula for syrup of wild cherry is not entirely satisfactory as the drug is not percolated to the extent that it should be for extraction. There is an excess of glycerin in the preparation.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1245.

Sayre, L. E., reports on 2 samples of syrup of wild cherry: both illegal.—*Ibid.* p. 1098.

PULVERES.

Lowry, W. J., discusses the making of granular effervescent powders and presents a number of formulas for improved N. F. preparations.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1234–1241.

PULVIS ACETANILIDI COMPOSITUS.

Beringer, George M., in commenting on the recommendation of a committee of the American Medical Association to delete the compound powder of acetanilide because: "There does not seem any reason for retaining this combination", asserts that the members of this same Association annually prescribe and dispense several tons of this powder, and asks should there not be a fixed standard.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 769.

LaWall, Charles H., reports that methods for the estimation of the several constituents of compound powder of acetanilide are necessary, in view of the importance of accurately declaring acetanilide under the various laws.—Am. J. Pharm. 1910, v. 82, p. 25.

An editorial (Brit. M. J. 1910, v. 1, p. 1073) on the nostrum nuisance, comments on the wonderful claims made by the makers of a certain notorious acetanilide compound, and, with apologies to Charles Lamb, remarks to the makers, "Your tablets may relieve pain—sometimes; but is there any reason to make such a fuss about it?"

The Pharmaceutical Journal (1910, v. 31 (85), p. 374) reports the death of a married woman after taking a headache powder containing acetanilide.

See also under Acetanilidum.

PULVIS EFFERVESCENS COMPOSITUS.

Rippetoe, John R., thinks it desirable to have an assay process for determining the presence of a proper amount of potassium and sodium tartrate in compound effervescent powder and outlines a method that has given satisfactory results.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1063

The Local Government Board (38th Ann. Rep. Part II) reports 6, out of 101, samples of Seidlitz powders examined in 1908, not standard.—Pharm. J. 1910, v. 30 (84), p. 33.

PULVIS GLYCYRRHIZÆ COMPOSITUS.

Dohme and Engelhardt state that the Ph. Hung. III directs that the compound licorice powder contain 1 gm. of oil of anise, 40 gm. of powdered sugar, 10 gm. of washed sulphur, 20 gm. of powdered licorice, and 20 gm. of powdered senna leaves.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1190.

Evans, J., asserts that a pharmacist who does not manufacture his own compound licorice powder, should satisfy himself that his sample is prepared in accordance with the requirements of the Pharmacopœia. Several instances of both careless manufacture and gross adulteration have come under his notice.—Brit. & Col. Drug. 1910, v. 57, p. 133.

Brown, Linwood A., states that compound licorice powder is sometimes attacked by insects, in which case there is only one thing to do—throw it away. This may be prevented by adding a few drops of chloroform to the container, thus saturating the air in the bottle with chloroform vapors.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 159.

PULVIS IPECACUANHÆ ET OPII.

An editorial (Critic and Guide, 1910, v. 13, p. 196) comments on the career of Dover and the origin of Dover's Powder.

Raubenheimer, Otto, points out that the often used Dover's Powder, which in most pharmacopœias contains 10 per cent of powdered opium, formerly ranged from 8.8 per cent in Spain to 14.3 per cent in Austria and Italy; and even 16 per cent in Belgium.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1136.

PULVIS MORPHINÆ COMPOSITUS.

Brown, Linwood A., suggests that, owing to the volatile nature of the camphor, compound morphine powder be kept in tightly stoppered bottles, and in a cool place.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 159.

PULVIS PEPSINI COMPOSITUS N. F.

Hallberg, C. S. N., suggests that the amount of pepsin in compound powder of pepsin be increased.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 28.

Barton, Wilfred M., thinks the occasion never arises when pepsin-pancreatin-diastase mixtures are of use in the treatment of dyspepsias. They may be of use as psychic playthings in pharmacotherapy.—J. Am. M. Ass. 1910, v. 55, p. 286.

Puckner and Warren report a study of aromatic digestive tablets and present details of their analysis. They point out that these tablets with six or more ingredients are typical "shotgun prescriptions" which serve to catch the unthinking doctor as well as the public.—Rep. Chem. Lab. Am. M. Ass. 1910, v. 3, pp. 64–70.

PULVIS RHEI COMPOSITUS.

Evans, J., asserts that much trouble has been caused in recent years by samples of Gregory's Powder having been sold which have either been made up with magnesium carbonate or, although made up with the oxide, have, by exposure to the air, taken up moisture and carbonic acid gas with the formation of a hydrated carbonate. A simple test will discriminate between properly made and carefully kept samples and samples which have been improperly made or carelessly stored.—Brit. & Col. Drug. 1910, v. 57, p. 132.

PYRETHRUM.

LaWall and Bradshaw report finding 6.1 per cent ash in pyrethrum root.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Havenhill, L. D., outlines a formula for the tincture of pyrethrum.—*Ibid.* p. 790.

PYROGALLOL.

Menge, George A., in a study of melting point determinations, reports on 6 samples of pyrogallol which were found to melt at from 131.9° to 132.8°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M. H. S., 1910, p. 93. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1043.

Wotring, R. J., points out that dry mixtures result when pyrogallol is mixed with salol.—Am. J. Pharm. 1910, v. 82, p. 241.

PYROXYLINUM.

Breves, Rudolph, points out that pyroxylin is not allowed to be shipped except under restrictions for high explosives, and he suggests that a concentrated solution of this substance might be introduced so that the inconvenience of shipping would be removed.—Practical Druggist, 1910, v. 28, p. 39.

Brown, Linwood A., states that unless well washed, pyroxylin seems to be prone to decomposition, which appears to be accelerated by light.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 143.

QUASSIA.

Tunmann, O., states that the consumption of quassia in Europe is now insignificant. The chief source of supply at the present time is Jamaica.—Apoth. Ztg. 1910, v. 25, p. 556.

LaWall and Bradshaw report finding 2.4 per cent ash in quassia.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Holmes, E. M., notes that it is not easy to prove legally that quassia has been exhausted. He gives some tabulated results of the investigation made by V. H. Kirkham, comparing exhausted with authentic museum specimens.—Pharm. J. 1910, v. 30 (84), p. 51. See also Chem. & Drug. 1910, v. 76, p. 115.

Havenhill, L. D., outlines a modified formula for the tincture of quassia.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 790.

Sayre, L. E., reports on 1 sample of fluid extract of quassia: illegal.—*Ibid.* p. 1098.

Osborne, Oliver T., asserts that the only use for quassia to-day is as a rectal injection of a fresh infusion when pin worms are present. There is no need for the extract, fluid extract or tincture.—J. Am. M. Ass. 1910, v. 54, p. 209.

Lloyd asserts that the medicinal properties of quassia were discovered by a negro slave, who in 1756 imparted his knowledge of the drug to the Swede, Rolander, who introduced it into Europe.—Eclectic M. J. 1910, v. 70, pp. 159–160.

QUERCUS.

LaWall and Bradshaw report finding 6.8 per cent ash in quercus alba.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 26) point out that the Ph. Germ. V restricts the thickness of quercus to from 1 to 2 mm.

Holm, Theo., describes and illustrates the structural characteristics of *Quercus alba* L. He discusses the internal structure of the vegetative organs and presents illustrations showing the cross sections of the young branch, part of petiole and the epidermis of leaf with stomata.—Merck's Rep. 1910, v. 19, pp. 2–4.

QUILLAJA.

Holmes, E. M., gives the distinctive characters of official, false and quilled quillaja bark.—Pharm. J. 1910, v. 30 (84), p. 79.

LaWall and Bradshaw report finding 9.1 and 9.5 per cent ash in quillaya.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 26) point out that the macroscopical description of quillaja has been materially elaborated in the Ph. Germ. V.

The Executive Committee of the British Pharmaceutical Conference suggests experiments to determine the best solvent for exhausting quillaia bark for the purpose of making emulsifying agents.—Year-Book of Pharmacy, 1910, p. 297.

Beringer, George M., asserts that 800 cc. of boiling water will not extract 100 gm. of quillaja, nor will the subsequent displacement with the amount directed suffice.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 783.

Havenhill, L. D., outlines a modified formula for the tincture of quillaja.—*Ibid.* p. 790.

Tunmann, O., reports that the use of soap bark for medicinal purposes continues to be small, though for technical purposes its use appears to be increasing despite the material advance in price.—Apoth. Ztg. 1910, v. 25, p. 566.

QUININA.

An editorial (Chem. & Drug. 1910, v. 77, p. 660) discusses quinine and cinchona, their production in Java and in India. See also *Ibid.* p. 458.

A news note (Oil, Paint and Drug Reporter, 1910, v. 78, September 19, p. 47) calls attention to the 48th annual report of the Government cinchona plantation and factory in Bengal, India, for the year 1909-10.

The Consular and Trade Reports (October 5, 1910, p. 60) notes that during the three months ended June 30, 1910, 15,270 pounds of quinine were declared for export to the United States from Netherlands India, via Batavia.

Tunmann, O., estimates the annual production of quinine as approximately 500,000 kg.—Apoth. Ztg. 1910, v. 25, p. 565.

Cohn, Georg, discusses the chemistry of quinine and some of its derivatives.—Pharm. Zentralh. 1910, v. 51, p. 266.

Schaefer, George L., presents some observations on the solubility of quinine and its salts in water at a temperature of 25°.—Am. J. Pharm. 1910, v. 82, pp. 175–178.

Dohme and Engelhardt outline the Ph. Hung. III test for the detection of foreign cinchona alkaloids in quinine.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1175.

Rosenthaler and Görner, in a discussion on the use of aromatic nitroderivatives as precipitants for alkaloids point out that none of the substances experimented with is appreciably more satisfactory than picric acid.—Ztschr. anal. Chem. 1910, v. 49, p. 345.

An editorial (Pharm. J. 1910, v. 31 (85), p. 547) calls attention to the prize of five hundred guilders, offered by the Preanger Kinabond at Bandoeng for the best method of estimating quinine in cinchona bark.

Katz, J., describes a new method of estimating quinine in drugs and preparations by titration, using Poirrier's blue as an indicator.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 316–329.

The editor (Chem. & Drug. 1910, v. 77, p. 612) calls attention to the fact that the great drawback to the use of Poirrier's blue as an indicator for titrating quinine and alkaloids is the difficulty of excluding any traces of carbonates, as even the carbonic acid in the air may affect the result.

Schaefer, George L., recommends the use of 0.1 gm. quinine and 10 cc. of sulphuric acid as the proper proportion in applying the U. S. P. sulphuric acid test.—Am. J. Pharm. 1910, v. 82, p. 222.

An editorial (Drug Topics, 1910, v. 25, p. 34) comments on the use of quinine as an anæsthetic.

Koldewijn, H. B., reviews some of the literature relating to the occurrence of quinine in the milk of animals and reports a number of experiments from which he concludes that quinine occurs, in minute quantities, in the milk of animals ingesting it.—Arch. Pharm. 1910, v. 248, p. 635.

Herzenberg, Roman, reports observations on the influence of quinine on the action of urethane and of morphine.—Ztschr. exper. Path. u. Therap. 1910, v. 8, pp. 582–584.

Brem, Walter V., in a study of malaria in Panama, discusses the quinine test for diagnosis, with some interesting statistics.—Arch. Int. Med. 1910, v. 6, pp. 646–661.

Whelan, J. H., concludes that quinine cures malarial fevers by destroying the homes and food of the *Plasmodia malariæ* before they can sporulate asexually.—Brit. M. J. 1910, v. 1, p. 986.

Lemchen, B., states that he knows of two cases of ectopic gestation where no etiological factor could be found except that the patient was taking quinine at the time that gestation ought to have taken place. He suggests that, as a protoplasmic poison, quinine may have interfered with the physiologic action of the Fallopian tubes.—Med. Rec. 1910, v. 78, p. 682.

Baermann, Gustav (Münch. Med. Woch., Bd. 56, H. 45, Nov. 1909) reports the death of a man after 2 doses of 0.5 gm. of quinine.—Biochem. Centralbl. 1909–10, v. 9, p. 539.

de Schweinitz (College of Phys. of Philadelphia, Sect. on Ophth., Dec. 16, 1909) reports a case of quinine poisoning.—Zentrlbl. Biochem. u. Biophysik. 1910, v. 10, p. 766.

Monroe, A. Leight, quotes J. B. Brown who states that quinine is recommended in the treatment of endocarditis when fever becomes intermittent and symptoms of malignancy occur, pulse accelerated, small and irregular, loss of strength, complete collapse, coldness, bluish appearance and syncope.—Hahnemann. Month. 1910, v. 45, p. 716.

McHenry, O. P., states that quinine is a good remedy in confinement. Two grains every fifteen minutes until ten or twelve grains are given, to be given when the patient ought to make progress but does not. First give your gelsemium and follow it with quinine. The labor soon becomes more earnest. More progress is made.—Eclectic M. J. 1910, v. 70, p. 141.

Brady, William, inveighs against the administration of quinine sulphate in hard coated compressed tablets.—N. York M. J. 1910, v. 91, p. 209.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 296–298) calls attention to a number of contributions on the use of quinine.

See also J. Am. M. Ass. and Index Medicus.

NONOFFICIAL SALTS OF QUININE.

Puckner, W. A., reports the reasons for not including quinine arsenate in N. N. R. He points out that attempts to substitute it for other quinine salts would be likely to lead to overdosing with arsenic.—Rep. Council Pharm. & Chem. 1910, pp. 73–74.

Dohme and Engelhardt state that the Ph. Hung. III gives a detailed process for making quinine tannate, as well as a method for determining the amount of quinine present and the estimation of foreign cinchona alkaloids.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1175.

QUININE AND UREA HYDROCHLORIDE.

Schaefer, George L., makes some practical observations concerning the properties of quinine and urea hydrochloride and gives some tests for its identification and purity.—Drug. Circ. 1910, v. 54, pp. 55–56. See also Drug Topics, 1910, v. 25, pp. 38–39.

Griswold, V. M., claims priority in the discovery of the local anæsthetic effect of quinine which he made in 1885, more than 10 years prior to his published report of 1896.—J. Am. M. Ass. 1910, v. 54, p. 1707.

Thibault, Henry, prefers quinine bisulphate for anæsthetic purposes. For inflamed tissues he uses quinine and urea bihydrochloride.—*Ibid.* p. 1992. See also p. 1375.

An unsigned article (Merck's Arch. 1910, v. 12, pp. 190–191) reviews some of the recent communications on the use of quinine and urea hydrochloride as a local anæsthetic, and concludes that this salt seems to be a very valuable addition to the list of local anæsthetics.

For additional references on the use of quinine and urea hydrochloride see J. Am. M. Ass. and Index Medicus.

QUININÆ BISULPHAS.

Dohme and Engelhardt outline the Ph. Hung. III test for determining foreign cinchona alkaloids in quinine bisulphate.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1175.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 62) report on a sample of quinine bisulphate which had undergone very rigorous climatic effects in the tropics.

Sayre, L. E., reports on 1 sample of quinine bisulphate: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.

QUININÆ HYDROBROMIDUM.

Schaefer, George L., proposes a modification of the ammonia test in the U. S. P. description of quinine hydrobromide, and asserts that the solubility in ether is not given correctly; it is practically insoluble or very difficultly soluble, requiring about 700 parts of the solvent for solution.—Am. J. Pharm. 1910, v. 82, p. 219.

QUININÆ HYDROCHLORIDUM.

Dohme and Engelhardt outline the Ph. Hung. III test for foreign alkaloids in quinine hydrochloride.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1175.

Schaefer, George L., points out that the melting point of the commercial salt is about 125°, and that the completely anhydrous salt melts at from 155–160°. He also criticises the solubility in ether and asserts that the salt is almost insoluble, requiring about 1,000 parts of the solvent.—Am. J. Pharm. 1910, v. 82, p. 219.

André and Leulier contribute a note on the rotatory power of neutral quinine hydrochloride.—J. Pharm. et chim. 1910, v. 2, p. 22.

QUININÆ SALICYLAS.

Seidell, Atherton, reports experimental determinations on the solubility of quinine salicylate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 0.06+ gm., and 100 gm. of U. S. P. alcohol will dissolve 4.84 gm. of quinine salicylate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 71–72, 91.

Schaefer, George L., gives the solubility of quinine salicylate as follows: in water at 25°, 1: 2100; in water at 80°, 1:280; in alcohol at 25°, 1:23; in alcohol at 60°, 1: 5; in ether about 1:780; in chloroform 1:10.—Am. J. Pharm. 1910, v. 82, p. 219.

QUININÆ SULPHAS.

Brown, Linwood A., points out that quinine sulphate should contain seven molecules of water of crystallization, which it rapidly loses on exposure to air. It also turns brown if unduly exposed to light.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 152.

Dohme and Engelhardt state that the Ph. Hung. III requires that quinine sulphate contain 8 molecules of water of crystallization.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1174–1175.

Howard, Howard and Chick present a comparison of some official tests of quinine sulphate, with tabluated statements of their results.—Pharm. J. 1910, v. 30 (84), pp. 607–608.

Schaefer, George L., recommends the use of 0.1 gm. quinine sulphate and 10 cc. of sulphuric acid as the proper proportion in applying the U. S. P. sulphuric acid test.—Am. J. Pharm. 1910, v. 82, p. 222.

RENNIN.

Blair, H. C., recommends a coagulating test for rennin.—Proc. Pennsylvania Pharm. Ass. 1910, pp. 252–253.

Bernegau, L. H., reports that four samples of rennin out of eight met the requirement of 1:25000 in milk coagulating power. It is essential, in testing rennin to use fresh milk which has not been Pasteurized, and to dissolve the rennin without agitation if concordant results are to be obtained.—*Ibid.* p. 145.

Funk and Niemann report observations on the filtration of rennin and of pepsin.—Ztschr. f. physiol. Chem. 1910, v. 68, pp. 263–272.

Signe and Sigval Schmidt-Nielson report observations on the influence of acids on the inactivating of rennin by shaking.—Ztschr. physikal. Chem. 1910, v. 69, pp. 547–556. See also Ztschr. physiol. Chem. 1910, v. 68, pp. 317–343.

Bernegau, L. H., reports that agitation produces a notable inhibitory action on the milk coagulating power of rennin. The presence of hydrochloric acid almost entirely prevents this inhibitory action of agitation and the presence of phosphoric acid also lessens the inhibitory action, though not to so great a degree as hydrochloric acid.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 225.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 62) report that in a comparison of the coagulatory powers, on milk, of well-known English and Bavarian rennets, they have found the range of activity to vary from a capacity of coagulating 5,000 to 166,000 times their own weight of milk.

For additional references on the chemistry and uses of rennin see Chem. Abstr., Zentrlbl. Biochem. u. Biophysik., and Exper. Sta. Rec.

RESINA.

Fichtenholz, A., quotes Tschirch as authority for the derivation of the word colophony from the name of the town Kolophon, north of Ephesus.—J. pharm. et chim. 1910, v. 2, p. ii.

Hartwich, C., thinks that the source of rosin should be indicated in the Pharmacopœia. He also discusses the acid number which he believes is approximately correct.—Apoth. Ztg. 1910, v. 25, p. 1052.

Dohme and Engelhardt state that the Ph. Hung. III directs that when colophony is heated quickly it should melt at 170°. No determination of the acid number is given.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1176.

RESINA JALAPÆ.

Dohme and Engelhardt state that the Ph. Hung. III directs that the resin of jalap should contain no more than 10 per cent of ether-soluble resin; 0.2 gm. of resin jalap dissolved in 2 cc. of acetic acid should not be colored red or green by the addition of 1 cc. of concentrated sulphuric acid.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1191.

Riedel's Berichte (1910, p. xxix) asserts that resin of jalap always contains more than 10 per cent of chloroform soluble material.

The Committee of Reference in Pharmacy suggests that the percentage of the resin soluble in ether (specific gravity 0.720) should be raised from 10 to 15.—Brit. & Col. Drug. 1910, v. 58, p. 28.

Weigel, G., presents some observations on the resins of scammony and jalap.—Pharm. Zentrlh. 1910, v. 51, pp. 721–727.

See also under Jalapa.

RESINA PODOPHYLLI.

Dohme and Engelhardt state that the Ph. Hung. III requires that one part of resin of podophyllum be soluble in 100 parts of ammonia water, and water added to this solution should not produce a turbidity.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1190.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 61) report that one American resin, probably adulterated with aloes, left 3.2 per cent of ash, 51.2 per cent was soluble in water, 46 per cent only was soluble in chloroform, 57.2 per cent only was soluble in ether.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 32) report that a sample drawn from a large batch of the resin of *Podophyllum peltatum* of their own manufacture yielded but 0.18 per cent of ash and traces only of matter insoluble in ammonia.

Bernegau, L. H., reports that of twelve samples of resin of podopyllum examined only three answered the U. S. P. requirements with regard to alcohol solubility and ash. Some ran as low as 92 and 93 per cent in alcohol-soluble material, and as high as 1.2 and 1.3 per cent in ash.—Proc. Pennsylvania Pharm. Ass. 1910, p. 145.

Sayre, L. E., reports on 7 samples of podophyllin: 3 passed; 4 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.

Gane, E. H., reports 5 samples of podophyllin varying from 0.5 per cent to 5.07 per cent insoluble in alcohol; from 58 per cent to 73 per cent soluble in chloroform; and from 56 per cent to 80.5 per cent soluble in ether.—*Ibid.* p. 746.

Williams, Jos. H., contributes a note on resin of podophyllum which he has recently found adulterated with approximately 25 per cent of powdered aloes. He thinks it advisable in applying tests for the purity of resin of podophyllum to ascertain also whether the sample yielded anything soluble in water.—Pharm. J. 1910, v. 30 (84), p. 608.

See also under Podophyllum.

RESINA SCAMMONII.

Rusby, H. H., states that vast quantities of a Mexican species of *Ipomœa* are collected for the extraction of its resin, to be sold for scammony. Such conditions are liable at any time to lead to the substitution of powdered jalap by this spurious article, either in its unchanged or exhausted form.—Drug. Circ. 1910, v. 54, p. 616.

Engelhardt and Schmidt review some of the recent articles and report some experimental work on resin of scammony.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1023–1030.

Weigel, G., presents some observations on resin of scammony.—Pharm. Zentralh. 1910, v. 51, pp. 721–727.

Francis, John M., thinks that there is very little evidence to prove that Oriental scammony is better or worse than the Mexican drug, but believes that he is correct in the statement that the Pharmacopœia does not permit the use of Mexican scammony.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1120.

Beilstein, Christian, reports that 3 lots of scammony resin were found to have saponification values of from 182 to 189. These were no doubt derived from the so-called Mexican scammony, as the saponification value of the true scammony resin is always much higher than this.—Proc. N. W. D. A. 1910, p. 107.

Dunn, John A., reports the results of investigations regarding the yield of resin from the various sources. The so-called Mexican scammony yields 12 to 13 per cent, while true scammony root yields about 8.4 per cent. He asserts that the two resins differ greatly not only in physical properties, but also in appearance and odor.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1118–1119.

Bernegau, L. H., reports that of four samples of resin of scammony submitted, two were very fine and two were very poor. One of the samples was evidently adulterated with guaiac resin and starch, while the other contained, besides guaiac resin and starch, other impurities the nature of which was not determined.—Proc. Pennsylvania Pharm. Ass. 1910, p. 145.

Quinlan, W. M., reports 6 samples of resin of scammony adulterated with starch.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 746.

See also under Scammonium.

RESORCINOL.

Menge, George A., in a study of melting point determinations, reports on 6 samples of resorcinol which were found to melt at from 110° to 110.5°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 93. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1043.

Scoville, W. L., says that resorcin varies in melting point from 110° to 114°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 746.

Eldred, Frank R., reports that seventeen lots of resorcinol were found to have melting points from 108° to 110°.—*Ibid.* p. 897.

Lemaire, Paul, discusses the melting point adopted for resorcin; seven samples which he examined gave 109°–110°.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 110–112.

Dohme and Engelhardt state that the Ph. Hung. III directs that the melting point of resorcinol be from 100° to 111°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1191.

Volcy-Boucher and Girard present a note on the characterization of resorcin by the cyano-cupric reaction.—Ann. chim. analyt. 1910, v. 15, p. 13.

Pope and Howard report experiments on the condensation of benzaldehyde and of anisaldehyde with resorcinol.—J. Chem. Soc., Lond., 1910, v. 97, pp. 78–83, 972–977.

Kauffmann and Pannwitz discuss the chemistry of some of the derivatives of resorcinol.—Ber. deutsch. chem. Gesellsch. 1910, v. 43, pp. 1205–1213.

Nothen, (Med. Klin. 1908, No. 24) reports 2 cases of poisoning from the external use of resorcin; in the one case a 15 per cent, in the other a 30 per cent ointment had been used.—Nouv. remèdes, 1910, v. 26, p. 119.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 299–300) calls attention to a paper by Schäffer (Berl. klin. Woch. 1910, No. 19, p. 890) on the addition of resorcin to alcohol dressings.

RHAMNUS PURSHIANA.

An editorial (Chem. & Drug. 1910, v. 77, p. 831) compares London and New York prices for cascara sagrada and notes that this drug is increasing in popularity in the United States.

Caesar & Loretz (Jahres-Ber. 1910, p. 11) express the belief that the consumption of cascara sagrada in Europe is decreasing, due to the fact that the indigenous frangula bark has been found to be fully as reliable and useful.

Tunmann, O., states that the harvesting of casara bark begins at the end of May or beginning of June and extends to the end of August. The collection of the drug is becoming more and more difficult because of the fact that a tree once peeled dies. He outlines a method of treating the bark and points out that the annual consumption is estimated to be from 1,200,000 to 1,300,000 kg.—Apoth. Ztg. 1910, v. 25, p. 558.

Francis, J. M., states that some of the cascara that has been placed on the market by western dealers during the past two years has proved to be very ineffective therapeutically. The exact identification of the cascara species is exceeding difficult after the drug has been dried and prepared for market. Nothing short of a very careful microscopical examination will afford any evidence, and even this is doubtful.—Proc. Pennsylvania Pharm. Ass. 1910, p. 145.

LaWall and Bradshaw report finding 4.9 per cent ash in cascara sagrada bark—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Vanderkleed, Chas. E., reports 1 assay of cascara, 3.92 per cent emodin; above standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 7) report that 10 samples of matured cascara sagrada proved to give percentages of water-soluble matter ranging from 21.6 to 26.6 and averaging 23.6.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 26) point out that the Ph. Germ. V requires that cascara sagrada be kept for at least 1 year before using. The extract content is to be at least 24 per cent, and the residual ash should not exceed 6 per cent.

Herzog and Fosse report the comparative results obtained by them in extracting cascara sagrada by percolation and by maceration and expression.—Ber. pharm. Gesellsch. 1910, v. 20, p. 336.

Kroeber, Ludwig, reports some experiments in the making of fluid extract of cascara sagrada by the use of Bruns' pressure percolator. He reiterates the freqently made observations that frangula contains a larger percentage of anthraquinone derivatives than does cascara sagrada.—Pharm. Zentralh. 1910, v. 51, p. 45.

Börner, Bernhard, presents formulas for a number of preparations of cascara sagrada.—Apoth. Ztg. 1910, v. 25, p. 591.

Jäggi reviews several recently published articles on the relative value of fluid extracts of cascara sagrada and of frangula. He gives the minimum extract content of cascara as 20 per cent in the Ph. Helv., and Ph. Austr. and 25 per cent in the Ph. Ndl. and Ph. Belg.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 377–382.

Thome, E. R., asserts that the use of hot water makes a superior fluid extract of rhamnus purshiana. Twenty per cent alcohol is all that is required as a preservative. He recommends the admission of a bitterless fluid extract, and gives directions for the preparation thereof.—Practical Druggist, 1910, v. 28, p. 122.

Dohme and Engelhardt state that the Ph. Hung. III directs that the fluid extract of cascara sagrada should have a specific gravity of 1.046 to 1.054 and should contain 25 per cent of dry extract.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1179.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, pp. 28–30), in commenting on the Ph. Germ. V fluid extract of cascara sagrada, point out that in this one instance the nomenclature of the preparation is not in accordance with the name of the drug, which is official as Cortex Rhamni Purshianæ.

Thome, E. R., asserts that the present formula for aromatic fluid extract of rhamnus purshiana is anything but agreeable. He presents a formula and directions for making this preparation that has been "tried" for over 15 years and is very satisfactory.—Practical Druggist, 1910, v. 28, p. 122.

A formula for cascara agar agar suggests macerating 50 parts by weight of agar agar in 15 parts by weight of bitterless fluid extract of cascara sagrada for 8 days and drying.—Svensk farm. Tidskr. 1910, v. 14, p. 167.

Brady, William, notes that cascara acts in 10 or 12 hours. It may be given at bed time.—N. York. M. J. 1910, v. 91, p. 212.

Webster asserts that *Rhamus californica* is too important a remedy to be left in the background. Macrotys cannot vie with it in the treatment of muscular pain. Pleurodynia, angina pectoris, lumbago, gastralagia, in fact muscular pain, aching pain in any part of the body where structural changes are not going on—calls for it.—Eclectic M. J. 1910, v. 70, p. 567.

RHEUM.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 50) point out that this drug is recognized by the Ph. Germ. V as "Rhizoma Rhei" in place of the former erroneous appellation "Radix Rhei." As now defined it is to yield at least 35 per cent of extract and not more than 12 per cent of ash.

Tschirch, A., in connection with illustrations of *Rheum palmatum* and *R. tanguticum* grown in the Botanical Garden at Berne, presents a short description of the plants.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 292–293.

Caesar & Loretz (Jahres-Ber. 1910, pp. 47–48), in commenting on the available supply of Chinese rhubarb, state that much of the commercial drug is of inferior quality.

Rusby, H. H., states that he has met with Chinese rhubarb which consisted of pie-plant root grown in Europe.—Practical Druggist, 1910, v. 27, p. 423.

Tunmann, O., discusses the production and use of rhubarb, presents a table showing the amount imported into Hamburg for the years 1897 to 1908 and a second table showing the imports into several European countries during the years 1905 and 1908.—Apoth. Ztg. 1910, v. 25, pp. 549–550.

Wiley, H. W., reports that rhubarb continues to be of excellent quality.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

Holmes, E. M., states that no accurate information is as yet available as to the source of Shensi rhubarb. He quotes some interesting notes from E. H. Wilson as to the collection of the roots.—Pharm. J. 1910, v. 30 (84), p. 80.

LaWall and Bradshaw report finding 8.2 per cent ash in rhubarb.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Caesar & Loretz (Jahres-Ber. 1910, pp. 106–108) outline a colorimetric method for the estimation of rhubarb according to Tschirch, also a method for differentiating between rheum and rhapontic root, and a method for detecting curcuma.

Oesterle and Johann report observations on the chemistry of so-called methyl chrysophanic acid.—Arch. Pharm. 1910, v. 248, pp. 476–491.

Rusby, H. H., states that we have as yet no sufficient grounds for asserting that the more or less decayed rhubarb frequently found is distinctly inferior.—Drug. Circ. 1910, v. 54, p. 619.

Osborne, Oliver T., thinks that the number of preparations of aloes and rhubarb should certainly be reduced.—J. Am. M. Ass. 1910, v. 54, p. 291.

Barfod, P. C. Tang, presents a paper on alkaline infusion of rhubarb.—Arch. Pharm. og Chem. 1910, v. 17, pp. 305–311.

Sayre, L. E., reports on 1 sample of syrup of rhubarb: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.

Langkopf, O., objects to the use of borax in tinctura rhei aquosa and syrupus rhei of the Ph. Germ.—Pharm. Ztg. 1910, v. 55, pp. 231–232.

Havenhill, L. D., outlines modified formulas for tincture of rhubarb and aromatic tincture of rhubarb.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 791.

The Local Government Board (38th Ann. Rep. Part II) reports 1, out of 53, samples of tincture of rhubarb examined in 1908, not standard.—Pharm. J. 1910, v. 30 (84), p. 33.

Brady, William, notes that rhubarb acts in 7 or 8 hours. This cathartic ought not to be given at bed time lest it disturb the night's rest.—N. York. M. J. 1910, v. 91, p. 212.

Yeager, Wm. H., states that rheum is indicated in diarrhœas of children when accompanied by sourness of the stools or a griping colic followed by tenesmus.—Hamnemann. Month. 1910, v. 45, p. 374.

RHUS GLABRA.

Rusby, H. H., states that he has met with *Rhus glabra* which was *R. typhina.*—Practical Druggist, 1910, v. 27, p. 424.

Holm, Theo., describes and illustrates the structural characteristics of *R. glabra* L.—Merck's Rep. 1910, v. 19, pp. 338–341.

An unsigned abstract states that profuse perspiration from disability is one of the late John M. Scudder's indications for rhus glabra. The prover, A. V. Marshall, experienced such profuse sweat during sleep that he discontinued the proving.—J. Am. Inst. Homœop. 1910, v. 2, p. 316.

ROSA GALLICA.

LaWall and Bradshaw report finding 3.9 per cent ash in red rose leaves.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Gane and Webster assert that confection of rose is an archaic product that should be dropped from the Pharmacopœia. It serves no purpose that cannot be better attained by other products.—Drug Topics, 1910, v. 25, p. 100.

Beringer, G. M., thinks that a small percentage of sulphuric acid should be added to the menstruum for fluid extract of red rose to extract the coloring.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 781.

RUBUS.

Holm, Theo., describes and illustrates the structural characteristics of *Rubus villosus* Ait.—Merck's Rep. 1910, v. 19, pp. 217–220.

LaWall and Bradshaw report finding 7.1 per cent ash in rubus.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

SABAL.

Dixon, J. Marion, discusses the occurrence of saw palmetto, the uses to which the plant is being put, and the possible uses of the fruit or berries as food and medicine.—Proc. Florida Pharm. Ass. 1910, p. 33.

Kraemer, Henry, discusses the pharmacognosy of saw palmetto (*Serenoa serrulata*), and presents a number of illustrations showing the structural characteristics of this plant.—Practical Druggist, 1910 v. 28, pp. 97–99.

Hommell, Philemon E., thinks that the U. S. P. should contain a fluid extract and a tincture of saw palmetto.—Merck's Rep. 1910, v. 19, p. 123.

Osborne, Oliver T., thinks that sabal should be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 377.

Coblentz, Virgil, states that while saw palmetto is prescribed about three times in a thousand in Philadelphia, it occurs thirty times in a thousand in Chicago.—Proc. Maine Pharm. Ass. 1910, p. 43.

SABINA.

Osborne, Oliver T., thinks that sabina and its fluid extract should be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54 p. 377.

Mamelli and Ganassini make a contribution to the toxicologic study of savin.—Ann. chim. analyt. 1910, v. 15, pp. 373–376.

SACCHARUM.

An unsigned article (J. Ind. & Eng. Chem. 1910, v. 2, pp. 162–163) presents a review of the sugar production of the world for the 1909–10 season.

An editorial (Ztschr. ang. Chem. 1910, v. 23, p. 604) reviews several communications on the production and increase in use of sugar.

Surface, George T., discusses the world's sugar supply and points out the relation between the sugar cane and the beet as sources of sugar.—Sc. Am. Suppl. 1910, v. 69, pp. 94–95.

The Bureau of Statistics is quoted as authority for the statement that, including imports and home production, about 7,500,000,000 pounds of sugar were consumed in the United States in the year ending June 30. The average per capita consumption, 82 pounds, exceeded that of any preceding year.—Cons. & Tr. Rep. Aug. 22, 1910.

v. Lippmann, Edmund, reviews the progress in the beet sugar industry during 1909.—Chem. Ztg. 1910, v. 34, pp. 21–22; 38–39.

Fallada, Ottokar, reviews the progress made in the beet sugar industry during the years 1908 and 1910.—Oesterr. Chem.-Ztg. 1910, v. 13, pp. 210–213.

A review calls attention to the book on beet sugar making and its chemical control, by Y. Nikaido.—J. Ind. & Eng. Chem. 1910, v. 2, p. 159.

Hartz and McElhenie believe it would be quite feasible for the Committee of Revision to insert in the purity rubric under saccharum a clause defining the granules to be such as will remain on a No. 20 sieve.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1270–1271.

Hankey, William T., recommends the use of "Crystal A" brand of sugar so as to avoid the presence of ultramarine.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 149.

Lemeland, P., suggests a method for the direct polarimetric estimation of saccharose in the presence of certain reducing sugars.—Ann. chim. analyt. 1910, v. 15, pp. 415–419.

Hudson, C. S., discusses the relation between the chemical constitution and the optical rotatory power of the sugar lactones.—Circ. Bur. Chem. U. S. Dept. Agric. 1910, No. 49, pp. 8. See also *Ibid.* No. 50, 55, 59, 60; J. Am. Chem. Soc. 1910, v. 32, pp. 338–346 ff., and J. Ind. & Eng. Chem. 1910, v. 2, pp. 143–146.

Rees, W. H., reports observations on optically active non-sugar of the sugar beet.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 323–325.

Wood, James, contributes a note on a method of distinguishing cane sugar from beet sugar.—Pharm. J. 1910, v. 31 (85), p. 599.

Hetper, Josef, discusses the practical application of the polariscope in the examination of sugar.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 19, pp. 633–644.

Jolles, Adolf, outlines a new method for the quantitative estimation of saccharose in the presence of other sugars.—*Ibid.* v. 20, pp. 631–640.

Hepburn, Joseph Samuel, reviews some of the recent progress in the chemistry of the sugars and more particularly the work of Emil Fischer upon sugars and ferments. He also presents a number of references to the publications from Fischer's laboratory.—J. Frankl. Inst. 1910, v. 170, pp. 85–116.

Feldhaus, F. M., calls attention to the history of the use of sugar as a preservative.—Chem. Ztg. 1910, v. 34, p. 529.

Desmoulieres and Lafay discuss the use of saccharine solutions for mercurial injections.—Southern Pharm. J. 1909–10, v. 2, p. 311.

Carles presents a note on caramel, its purity, estimation and adulteration.—Ann. chim. analyt. 1910, v. 15, p. 305.

For additional references on the chemistry, production and uses of sugar see Chem. Abstr., J. Ind. & Eng. Chem., Exper. Sta. Rec., Cons. & Tr. Rep., J. d'Agric. trop.

SACCHARUM LACTIS.

Aufsberg, T., discusses the manufacture of lactose from whey.—Chem. Ztg. 1910, v. 34, p. 885.

Porcher, Ch., reports observations on the origin of milk sugar and the physiological phenomena involved.—Biochem. Ztschr. 1909–10, v. 23, pp. 370–401.

Menge, George A., in a study of melting point determinations, reports that sugar of milk decomposes at the melting point and therefore requires further investigation.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, p. 92.

Caesar & Loretz (Jahres-Ber. 1910, p. 73) express the belief that a satisfactory sample of sugar of milk should give a clean, uncolored and odorless solution with an equal weight of water.

Fischer and Fischer, in a contribution on the chemistry of sugar of milk, discuss several derivatives of sugar of milk and of maltose.—Ber. deutsch. chem. Gesellsch. 1910, v. 43, pp. 2521–2536.

Dohme and Engelhardt state that the Ph. Hung. III test for cane sugar in sugar of milk is the same as that in the U. S. P., that is, treating the milk sugar with dilute alcohol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1191.

Rippetoe, John R., thinks that the test for absence of cane sugar is still unsatisfactory. He outlines a test which will show the presence of less than 1 per cent of cane sugar.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1064. See also Rosengarten, George D., Am. J. Pharm. 1910, v. 82, p. 31.

Dunning, H. A. B., asserts that the test for cane sugar in sugar of milk, by sprinkling some of the specimen on sulphuric acid is not at all delicate. He outlines a much better test.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 970.

Evans, J., calls attention to the need of testing milk sugar. The presence of the salts of magnesium and calcium is probably due to the use of lime and magnesium, added to the milk whey during the crystallization and to neutralize the acid previously used to curdle the milk. More than traces of lactic acid are also guarded against for the same reason.—Brit. & Col. Drug. 1910, v. 57, p. 132.

van der Wielen, P., discusses the examination of sugar of milk. He points out that apart from a trace of iron no metallic salts should be present in the ash.—Pharm. Weekblad. 1910, v. 47, pp. 870–871.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 72) report that 1 sample of sugar of milk examined, although chemically pure, had a markedly sour odor and flavor, due to careless separation and fermentation.

Howard, Charles D., reports that two samples of milk sugar, out of 13 examined, were "Not conformable."—Rep. New Hampshire Bd. Health, 1910, v. 21, p. 205.

Bourdet, L., discusses the estimation of lactose by the cuprometric method, with a tabulated summary of results published elsewhere.—Bull. sc. pharmacol. 1910, v. 17, pp. 16–19.

Baker and Hulton discuss the estimation of lactose in the presence of the commonly occurring sugars.—Analyst, London, 1910, v. 35, pp. 512–516. See also *Ibid.* pp. 516–517.

Dewey, W. A. (Med. Century) states that a harmless yet efficient method of moving the bowels and bladder is said to be to dissolve three teaspoonfuls of pure sugar of milk in hot water, and take before a meal, preferably breakfast.—J. Am. Inst. Homœop. 1910, v. 2, p. 420.

SAFROLUM.

Dodge, Francis D., in discussing the analysis of essential oils, states that safrol does not satisfactorily replace oil of sassafras and that the purer this article is obtained the less valuable in a way does it appear to be.—Am. Perf. 1910–11, v. 2, p. 99.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 153) point out that safrol is now accepted by the German Government as a denaturant for alcohol, the characters given being "a liquid of a penetrating odor, colorless or yellowish; specific gravity 1.105 to 1.107; boiling point approximately 233° (760 mm.)"

SALES.

Lowry, W. J., discusses the making of granular effervescent powders and presents formulas for improved N. F. preparations.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1234–1241.

Cheney, Frank L., discusses the making and marketing of effervescent salts, more particularly the dry powder form of the National Formulary.—Proc. Vermont Pharm. Ass. 1910, pp. 45–49.

SALICINUM.

Menge, George A., in a study of melting point determinations, reports on 4 samples of salicin which were found to melt at from 199.9° to 200.6°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, p. 94. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1043.

Eldred, Frank R., reports that the melting points of seven lots of salicin were from 196.5° to 198°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 897.

Ciamician and Ravenna (Atto. acad. Lincei, 18, I, 419–22; cf. C. A., 3, 1178) report observations on the synthesis of salicin by plants.—Chem. Abstr. 1910, v. 4, p. 1620.

SALVIA.

Kremers, Edward, reports on the cultivation of sage which is preferably obtained from the second year plant.—Proc. Wisconsin Pharm. Ass. 1910, p. 36.

Delpy, Hedwig, reports a pharmacognostical study of *Salvia officinalis* L.—Ztschr. allg. österr. Apoth.-Ver. 1910, v. 48, p. 292.

LaWall and Bradshaw report finding from 3.8 to 8.0 per cent ash in salvia.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Rusby, H. H., thinks that the portion of "top" permissible in salvia should be specified as not exceeding 3 inches in length.—Drug. Circ. 1910, v. 54, p. 617.

The same author states that he has met with ground sage containing about 25 per cent of damaged flour.—Practical Druggist, 1910, v. 27, p. 424.

SANGUINARIA.

LaWall and Bradshaw report finding 4.55 per cent ash in sanguinaria.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Vanderkleed, Chas. E., reports 8 assays of sanguinaria, lowest, 4.465, highest, 7.510 per cent alkaloids; all above standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Scoville, W. L., reports that all the preparations of sanguinaria examined by him had deteriorated.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 882.

Rippetoe, John R., thinks that the fluid extract of sanguinaria should have an alkaloidal standard and an assay process for determining the same.—*Ibid.* p. 1062.

Patch, Edgar L., asserts that acetic fluid extract of bloodroot is a source of annoyance on account of variability.—*Ibid.* p. 740.

Havenhill, L. D., outlines a modified formula for the tincture of sanguinaria.—*Ibid.* p. 791.

Bernegau, L. H., found sanguinarine nitrate only 52 per cent pure. It contained potassium nitrate, sugar of milk and aniline dye.—*Ibid.* p. 746. See also Proc. Pennsylvania Pharm. Ass., 1910, p. 146.

An unsigned abstract (Hom. Envoy) recommends sanguinaria for a tickling cough in those subject to bilious headache.—J. Am. Inst. Homœop. 1910, v. 2, p. 138.

Leming, W., points out that the specific indications for sanguinaria canadensis are: sluggish capillary circulation, with relaxation of mucous membranes and general inactivity of the nervous system.—Eclectic M. J. 1910, v. 70, p. 180.

SANTONICA.

Tunmann, O., states that, since the introduction of santonin factories in Tschimkent and in Taschkent, the export of santonica has materially decreased. He presents tables showing the export of the drug from Russian ports during the years 1899, 1902, 1905, and 1908 with data showing the destination of much of this drug; approximately 70,000 kg., annually, going to the United States.—Apoth. Ztg. 1910, v. 25, pp. 716–717.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 32) point out that the Ph. Germ. V describes santonica both macroscopically and microscopically and provides an identification reaction, using an alcoholic solution of potassium hydrate, which colors the powder yellow. The ash content is not to exceed 10 per cent.

LaWall and Bradshaw report finding from 4.32 to 9.7 per cent ash in Levant wormseed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Goerlich, R., discusses the estimation of santonin in santonica and in preparations of this drug.—Apoth. Ztg. 1910, v. 25, pp. 801–804; 812–814; 823–826.

Klobb, Garnier and Ehrwein describe certain hydrocarbons derived from santonica.—Bull. Soc. chim. France, v. 7, p. 947.

SANTONINUM.

Menge, George A., in a study of melting point determinations, reports on 5 samples of santonin which were found to melt at from 171.2° to 172.1°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, p. 94. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1043.

Eldred, Frank R., reports that 16 lots of santonin melted between 169° and 171°; one lot at 166° and one at 168°. A melting point requirement of from 169° to 171° would probably be satisfactory.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 897.

Levi, Malvano and Mannino (Atti. acad. Lincei, 18, II, 144–9) report observations on partial racemates among the derivatives of santonin.—Chem. Abstr. 1910, v. 4, p. 1618.

Pellissier claims that when santonin is dissolved in oil it is not acted upon by the digestive juices, but passes into the intestines in an active state.—Chem. & Drug. 1910, v. 76, p. 354.

Baxter, E. J., reports the case of a girl of 5 years who lost her vision after taking half a grain of santonin.—Lancet, 1910, v. 179, p. 1693.

Neer, C. S., reports a case of fatal santonin poisoning, in a girl, 2 years old.—Critic and Guide, 1910, v. 13, p. 215.

Denigès, G., calls attention to a chromogen, derived from santonin, sometimes used in certain forms of diabetes, which may prove a source of error in the determination of urinary peptones.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, p. 104.

SAPO.

An unsigned article (Nat. Druggist, 1910, v. 40, p. 411) presents some historical notes on soap, its probable origin and its early uses.

Dohme and Engelhardt state that the Ph. Hung. III directs that soap be made with sesame oil.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1191.

Liemdorfer, J. (Seifensieder Ztg.) presents a comprehensive discussion of the colloid chemistry of soap.—Am. Perf. 1910–11, v. 5, pp. 182–183; 198; 227–229; 236; 242–243.

An unsigned article (Am. Perf. 1910–11, v. 5, p. 10) reprints the soap specifications of the German state railways.

Pearson, W. A., reports that the U. S. P. tests are not sufficient to detect a soap that has not been made from olive oil. Of five soaps examined, two were found not to have been made from olive oil.—Proc. Pennsylvania Pharm. Ass. 1910, p. 146.

van der Wielen, P., reports observations on the determination of sodium chloride in soap. He thinks the Ph. Ndl. limitation of 2 per cent sodium chloride in medicinal soap too low.—Pharm. Weekblad, 1910, v. 47, p. 869.

Meade and Pearson report assays of commercial castile soap.—Proc. Pennsylvania Pharm. Ass. 1910, p. 321.

Bernegau, L. H., reports that of seventeen lots of soap examined one, which came from a Spanish source, was adulterated with animal fats.—Proc. Pennsylvania Pharm. Ass. 1910, p. 146.

Beilstein, Christian, reports that 2 samples of castile soap were found which were not made from olive oil. The fatty acids were separated and examined. No other method is reliable.—Proc. N. W. D. A. 1910, p. 103.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 69) report that 8 samples of white castile soap submitted were all genuine olive oil soaps; one sample of somewhat imperfect manufacture, but apparently made from a genuine, if inferior, olive oil, contained an abnormal quantity of chalk as a facing agent, equivalent to at least 0.2 per cent of $CaCO_3$.

Sayre, L. E., reports on 5 samples of soap: 2 passed; 3 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.

Schnabel comments on the Ph. Germ. V directions for making preparations of soap, and presents a number of modifications for spiritus saponatus, spiritus saponato-camphoratus, spiritus saponatus kalinus, linimentum terebinthinatum, linimentum saponato-ammoniatum, emplastrum saponatum rubrum.—Apoth. Ztg. 1910, v. 25, p. 210.

Spring, W., presents some observations on the detersive action of solutions of soap.—Bull. Soc. chim. Belg. 1910, v. 24, pp. 17–54. See also Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, p. 609.

SAPO MOLLIS.

Webb, E. N., points out that the U. S. P. makes no requirements regarding the amount of finished product in connection with the formula for sapo mollis.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 614.

Dohme and Engelhardt state that the Ph. Hung. III directs that soft soap be made with sesame oil.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1191.

Nitardy, F. W., recommends the use of cotton seed oil in the manufacture of soft soap instead of linseed oil.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 375.

Hartz and McElhenie state that it is easier to procure cotton seed oil of good quality than linseed oil, and no alcohol or heat is necessary to make a soap of the best grade.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1271.

Rippetoe, John R., thinks that the test for limit of free alkali gives variable results, depending upon the length of time in obtaining the aqueous solution, temperature and amount of phenolphthalein indicator added.—*Ibid.* p. 1064.

An unsigned article (Am. Perf. 1910–11, v. 5, p. 10) reprints the specifications of the German state railways for soft soaps.

Bernegau, L. H., reports that of twelve samples of soft soap examined, all were strictly U. S. P. except one, the alkalinity of which was a trifle high.—Proc. Pennsylvania Pharm. Ass. 1910, p. 146.

Richter, E. outlines a method for preparing spirit of soap directly from olive oil.—Apoth. Ztg. 1910, v. 25, p. 730.

SARSAPARILLA.

Harris, Wm., states that the sarsaparilla plant was introduced in Jamaica by Z. Bayley in 1765 and is now cultivated in Manchester, St. Elizabeth, Trelaway and other sections.—Bull. Dept. Agric. Jamaica, 1910, v. 1, No. 3, p. 187.

Muschler, Reno, describes and illustrates the structural characteristics of a so-called sarsaparilla from Angola, West Africa.—Pharm. Ztg. 1910, v. 55, p. 928.

Tunmann, O., in discussing the amount of sarsaparilla imported into Hamburg, asserts that the consumption of sarsaparilla has decreased materially. The chief market for sarsaparilla, at the present time, appears to be the United States.—Apoth. Ztg. 1910, v. 25, pp. 475–476.

An editorial (Drug Topics, 1910, v. 25, pp. 114–115) comments on the vanishing of sarsaparilla, and concludes that it is a great shame to abolish sarsaparilla; it was the vital elixir of the spring.

Rusby, H. H., thinks that the presence of the objectionable rhizome in sarsaparilla should be provided against by adding a histological description for its detection in the powder.—Drug. Circ. 1910, v. 54, p. 617. See also Practical Druggist, 1910, v. 27, p. 423.

The Committee of Reference in Pharmacy recommends that for making the liquid extract the drug be in number 20 powder and be exhausted by the process of repercolation until a percolate is obtained, of which 18 fluid parts represent 20 parts by weight of the drug; the glycerin should then be added.—Brit. & Col. Drug. 1910, v. 58, p. 12.

Osborne, Oliver T., thinks there is no tangible reason why the syrup of sarsaparilla compound should be perpetuated, either for itself or on account of its frequent use as a menstruum for iodides. He would eliminate sarsaparilla, its fluid extract, compound fluid extract and the compound syrup.—J. Am. M. Ass. 1910, v. 54, p. 468.

SASSAFRAS.

LaWall and Bradshaw report finding 4.15 per cent ash in sassafras bark.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Jenkins, E. L. (Brit. M. J. 1910, 1, 260), reports on the use of sassafras as a parasiticide.—Year-Book of Pharmacy, 1910, p. 189.

SCAMMONIUM.

Dunn, John A., asserts that for the past few years it has been practically impossible to obtain, in the home market or abroad, any old-fashioned virgin scammony.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1118.

The Pharmaceutical Journal says that a fictitious gum scammony is reported in French commerce. Brownish cakes, less dense than the genuine, more porous fracture, less active.—*Ibid.* p. 746.

Engelhardt, Hermann, reports that the supply of exudate and the true root of scammony seems to be nearly exhausted, while large quantities of Mexican root are offered on the market.—*Ibid.* p. 1258.

Rusby, H. H., asserts that very little real scammony is now dispensed when that substance is prescribed. A huge tuber of Mexican origin, that did duty a generation ago under the name of "male jalap" for the substitution of genuine jalap, is now masquerading again as "Mexican scammony" and from it is extracted the substance now generally supplied as scammony.—Drug. Circ. 1910, v. 54, p. 7.

Engelhardt and Schmidt report a study of scammony and resin of scammony.—Am. J. Pharm. 1910, v. 82, pp. 428–437. See also Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1023–1030.

Goris and Fluteaux present the results of their analysis of a sample of scammony collected by Guigues.—Bull. sc. pharmacol. 1910, v. 17, pp. 15–16.

Beilstein, Christian, reports that 6 lots of so-called Mexican scammony have been offered as scammony root. The true scammony root seems to be very scarce.—Proc. N. W. D. A. 1910, p. 105.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 66) report that 2 samples of virgin scammony were tested containing 80 and 86 per cent of resin soluble in 0.720 ether. A third sample was offered containing only 69.5 per cent of true resin.

Osborne, Oliver T., thinks it probable that scammony could be dropped without any serious loss of cathartic efficiency.—J. Am. M. Ass., 1910, v. 54, p. 291.

See also under Resina Scammonii.

SCILLA.

Sharp, Gordon, presents an interesting paper on the history of squill.—Pharm. J. 1910, v. 30 (84), pp. 136–138, 170–171. See also an editorial note, Lancet 1910, v. 178, p. 1284.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 14) point out that the Ph. Germ. V describes squills as being derived from *Urginea maritima* (Linné) Baker, and presents a macroscopical as well as microscopical description. The ash content is limited to a maximum of 5 per cent and the drug is to be kept over freshly calcined lime to protect it from moisture.

LaWall and Bradshaw report finding 2.7 per cent ash in squill.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Beilstein, Christian, reports squills consisting of small hearts.—Proc. N. W. D. A. 1910, p. 100.

Dohme and Engelhardt state that the Ph. Hung. III fluid extract of squill is not made with acetic acid as directed in the U. S. P.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1183.

Clark, Walter S., gives experimental data which show that during the precipitation in syrup of squill, there is considerable inversion and a loss of about 6 per cent of acid and, judging by the rotation, no apparent decomposition of the glucoside. Standardization by acid content and specific gravity is recommended.—Chem. & Drug. 1910, v. 77, p. 168.

Havenhill, L. D., outlines a modified formula for the tincture of squill.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 791.

Githens and Vanderkleed discuss the physiologic standardization of cardiac stimulants, comparing such standardization with some results obtained by chemical assay, they present standards for squill, fluid extract of squill and tincture of squill.—*Ibid.* p. 918.

Osborne, Oliver T., thinks squill a nasty disagreeable drug to take and that the syrup and compound syrup could well be omitted from the Pharmacopœia. If needed at all there is certainly no need for all of the preparations now in the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 377.

SCOPARIUS.

Chevalier, J. (Sem. méd.), discusses the variation in the sparteine content of scoparius according to the period of vegetation. He gives a tabulated statement of the content from month to month.—Nouv. remèdes, 1910, v. 26, p. 334.

SCOPOLA.

Abromeit reports an examination of *Scopola carniolica* and points out that the more desirable quality of this drug comes from Dalmatia.—Pharm. Post, 1910, v. 43, pp. 757–758. See also Pharm. Ztg. 1910, v. 55, p. 803.

LaWall and Bradshaw report finding 6.65 per cent ash in scopola root.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Beilstein, Abraham, reports that one lot of *Scopola japonica* was offered in place of *S. carniolica*, which is the official species.—Proc. N. W. D. A. 1910, p. 106.

Engelhardt, Hermann, reports that the quality of scopola has been very poor during the year 1909; 11 samples out of 15 had to be rejected, assaying less than 0.5 per cent of total mydriatic alkaloids.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1258.

Lyons, A. B., reports the requirements and methods of assay for scopola included in the U. S. P.—Am. Druggist, 1910, v. 56, p. 104.

Scoville, W. L., thinks that the U. S. P. method of assay for scopola is satisfactory when Mayer's reagent is carefully used to insure complete extraction.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 820.

SCOPOLAMINÆ HYDROBROMIDUM.

Dohme and Engelhardt state that the Ph. Hung. III directs that scopolamine hydrobromide should melt at about 190°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1191.

Barnes, F. M., presents a study of the influence of scopolamine-morphine narcosis on metabolism.—Arch. Int. Med. 1910, v. 5, pp. 374–381.

Hatcher, Robert A., presents a study of scopolamine and morphine in narcosis and in childbirth.—J. Am. M. Ass. 1910, v. 54, pp. 446–451; 516–519. See also editorial p. 540, and Rep. Council Pharm. & Chem. 1910, pp. 11–38.

An editorial (Therap. Gaz. 1910, v. 34, pp. 178–180) reviews and comments on some of the recent literature relating to the value of scopolamine-morphine with or without a general anæsthetic.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 324–328) reviews a number of contributions on scopolamine hydrobromide.

For additional references see J. Am. M. Ass.

SCUTELLARIA.

Rusby, H. H., states that the skullcap met with is almost always of a different species from that named by the Pharmacopœia.—Practical Druggist, 1910, v. 27, p. 424.

SENEGA.

Fichtenholz, A., quotes Tschirch as authority for the derivation of the word senega from the name of the North American Indian tribe, *Seneca*.—J. pharm. et chim. 1910, v. 2, p. ii.

Tunmann, O., discusses the economic conditions of the market for senega and presents a table showing the importation of this drug into Hamburg from 1898 to 1909.—Apoth. Ztg. 1910, v. 25, p. 476.

Caesar & Loretz (Jahres-Ber. 1910, p. 49) point out that the price of senega root is steadily increasing.

LaWall and Bradshaw report finding 5.05 per cent ash in senega root.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Sayre, L. E., reports on 1 sample of fluid extract of senega: illegal.—*Ibid.* p. 1098.

Beringer, G. M., states that he is not satisfied with the fluid extract of senega made by the U. S. P. formula. It deposits a gelatinous sediment.—*Ibid.* p. 781.

Thome, E. R., asserts that the addition of alkali as at present does not prevent, but merely retards, the gelatinization of fluid extract of senega. He thinks it should be increased considerably.—Practical Druggist, 1910, v. 28, p. 122.

Fox, W. M., thinks that the U. S. P. VIII formula for syrup of senega is not as satisfactory as was the recipe of 1890, the present product gelatinizing more rapidly.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 149.

Beringer, George M., states that in most of the foreign pharmacopœias syrup of senega is directed to be made by infusion of the ground drug or percolation with weak alcohol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1245.

Hommell, Philemon E., thinks that syrup of senega should be directed to be made extemporaneously.—Merck's Rep. 1910, v. 19, p. 121.

Members of the Denver Branch of the A. Ph. A., in connection with syrup of senega, recommend mixing the fluid extract with 375 cc. of water, filtering and dissolving the sugar in the filtrate. This gives a much more elegant preparation than the present official process.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 167.

Henderson and Taylor find that senega produces bronchial secretion reflexly.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, p. 159.

SENNA.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 35) point out that the Ph. Germ. recognizes *Cassia angustifolia* or the Tinnevelly variety of senna and permits an ash content of not more than 12 per cent.

Tunmann, O., asserts that Tinnevelly senna is usually preferred at the present time. The market for senna is controlled in London and the drug is largely exported from Tutikorin, Alexandria, Suakin and Massaua.—Apoth. Ztg. 1910, v. 25, p. 706.

LaWall and Bradshaw report finding 7.5 and 8.9 per cent ash in Alexandrian senna.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Rusby, H. H., states that senna is very frequently contaminated with 25 per cent or more of sand and is ground in this condition.—Drug. Circ. 1910, v. 54, p. 7. See also Practical Druggist, 1910, v. 27, p. 424.

Beringer, G. M., asks if the preliminary treatment of senna with alcohol is necessary, or whether it is generally followed by the manufacturers. He thinks it is extremely wasteful of alcohol, adding very materially to the cost.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 781–782.

Thome, E. R., thinks the formula of 1890 for fluid extract of senna is superior to that now official and it is frequently specified as preferred.—Practical Druggist, 1910, v. 28, p. 122.

Hallberg, C. S. N., expresses himself as opposed to borax in the formula for aromatic syrup of senna and compound syrup of senna.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 29.

Members of the Denver Branch of the A. Ph. A. suggest reducing the oil of coriander to 2 gm. in the formula for confection of senna. It gives a more agreeable product.—*Ibid.* p. 166.

Brady, William, notes that senna acts in 4 or 5 hours. This cathartic ought not to be given at bed time lest it disturb the night's rest.—N. York M. J. 1910, v. 91, p. 212.

Tyrode, Maurice Vejux, quotes Magnus to the effect that senna does not change the peristalsis of the stomach or of the small intestine but markedly increases that of the large bowel; and further that the purgative action in animals is not arrested by destruction of the lumbar and sacral cord.—Boston M. & S. J. 1910, v. 162, p. 176.

SERPENTARIA.

Oldberg, Oscar, states that the name serpentaria is derived from the Latin *serpens*, snake.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 757.

Havenhill, L. D., outlines a modified formula for the tincture of serpentaria.—*Ibid.* p. 791.

Hommell, Philemon E., states that tincture of serpentaria is rarely prescribed and should be eliminated.—Merck's Rep. 1910, v. 19, p. 122.

Osborne, Oliver T., thinks that serpentaria and its fluid extract are not needed in the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 209.

SERUMS AND VACCINES.

SERUM ANTIDIPHTHERICUM.

The editor of the Therapeutics Column (J. Am. M. Ass. 1910, v. 55, p. 1647) discusses the preparation and uses of antidiphtheric serum.

Park, William H., presents a communication on antidiphtheritic serum and antidiphtheritic globulin solutions.—*Ibid.* v. 54, p. 251.

Alkire, L. L., presents a resumé of the method of making diphtheria antitoxin and globulin.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 164–166.

Yarbrough, Charles C., discusses the nature and the production of antidiphtheric serum.—Western Druggist, 1910, v. 32, pp. 122–126.

Gilliland, S. H., is reported as discussing the production and keeping of diphtheria antitoxin, vaccine virus, tuberculin and the virus used in the treatment of rabies.—P. C. P. Alumni Report 1910, v. 47, pp. 76–79.

Banzhaf, Edwin J., reports the results of his determinations of the deterioration of diphtheria antitoxin for three or four years at icebox and room temperatures.—J. Biol. Chem. 1910, v. 7, p. xlv.

Anderson, John F., reports a study on the influence of age and temperature on the potency of diphtheria antitoxin. He presents tables and diagrams showing the loss in potency of various samples of sera during the time they were under observation. He concludes that the average yearly loss in potency of diphtheria antitoxin at room temperature is about 20 per cent; at 15°, about 10 per cent, and at 5°, about 6 per cent.—Bull. No. 66, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 9–26. See also J. Infect. Dis. 1910, v. 7, p. 481, and editorials, J. Am. M. Ass. 1910, v. 55, p. 861, Boston M. & S. J. 1910, v. 163, p. 372, and Lancet, 1910, v. 179, p. 958.

Frouin, Albert, contributes a note on the influence of temperature of coagulation of antidiphtheric serum on the extraction of antitoxin by solutions of NaCl. He has previously shown that antitoxin thus obtained does not give rise to anaphylactic phenomena in animals.—Compt. rend. Soc. Biol. 1910, v. 68, p. 173.

Nicolle and Loiseau discuss the two essential properties of antidiphtheric serum: toxinocoagulant and albuminolytic.—*Ibid.* v. 69, p. 8.

Martin, Prevot and Loiseau report on a comparative examination of the agglutinating and antitoxic powers of antidiphtheric serum: their therapeutic value.—*Ibid.* v. 69, p. 56. See also *Ibid.* v. 68, pp. 1004 and 1128.

Henseval, M. (Bul. Serv. santé et hygiène, 1909, 298–312) discusses methods of control of antidiphtheric serum as to 1) physical characters, 2) sterility, 3) presence of toxins and tetanic spores, 4) antiseptic content, 5) therapeutic efficacy, a) antitoxic power (Ehrlich), A. toxin testing, B. antitoxic power, b) preventive power (Roux), c) curative power (Roux), C. toxicity by anaphylaxis (Besredka).—Bull. Soc. roy. pharm. Brux. 1910, v. 54, pp. 66–71.

Dixon, Samuel G., in a discussion on state control of contagious and infectious diseases, reports on the distribution of diphtheria antitoxin.—Am. J. Pharm. 1910, v. 82, pp. 335–336.

An editorial (Lancet, 1910, v. 179, p. 1229) discusses, pro and con, the question of the supply of diphtheria antitoxin by local [municipal] authorities.

The Forty-second Annual Report of the State Board of Health of Massachusetts (1910, pp. 397–401) gives the statistics relative to the production and distribution of diphtheria antitoxin. The Board issued 92,623 packages of antitoxin of 1,500 units to cities and towns. (*Ibid.* p. 40).

Lindemann reports observations on tropines and opsonins in diphtheria immune sera.—Arb. a. d. k. Gsndhtsamte, 1910, v. 36, pp. 163–170.

Hoger comments on the use of bacterial vaccines for diphtheria.—Pharm. Zentralh. 1910, v. 51, pp. 244–247.

Smith and Brown present further studies on the immunizing effect of mixtures of diphtheria toxin and antitoxin.—J. Med. Research, 1910, v. 23, pp. 433–449.

Simpson, L., reports a case of extreme sensitization from a prophylactic dose of diphtheria antitoxin.—J. Am. M. Ass. 1910, v. 55, p. 613.

Rankin and Pryce report a case, infant of 21 months, in which a profuse urticaria developed within 15 minutes after the injection of 5000 units of concentrated diphtheria antitoxin.—Lancet, 1910, v. 179, p. 1760.

Neuwelt, Louis, reports an unusually quick rash following injection of diphtheria antitoxin.—J. Am. M. Ass. 1910, v. 55, p. 1200.

Collier, Elisabeth MacVeen, reports a half dozen cases in which menstrual disturbance followed the administration of diphtheria antitoxin.—*Ibid.* v. 54, p. 1518.

Tachau, Hermann, discusses the intravenous injection of curative sera in diphtheria and cites some of the available literature.—Therap. Gegenw., Berl., 1910, v. 51, pp. 346–348.

An editorial (J. Am. M. Ass. 1910, v. 54, p. 1312) discusses the intravenous injection of antitoxic serum with a brief review of recent literature.

Additional references on the production and use of antidiphtheric serum will be found in Hyg. Rundschau, Index Medicus, and J. Am. M. Ass.

Anderson, John F., describes the commercial preparations of tetanus antitoxin, gives a table showing the difference in the methods of testing tetanus antitoxin before the adoption of the American unit, and summarizes the advantages which have accrued from Federal control of therapeutic serums.—J. Am. M. Ass. 1910, v. 54, p. 253.

An editorial (Therap. Gaz. 1910, v. 34, pp. 322–323) comments on the employment of tetanus antitoxin and presents a table showing the differences in the methods of testing tetanus antitoxin before the adoption of the American unit.

Rosenau, Weaver and Baldwin, for the Section on Pathology and Physiology, present the argument for the admission of tetanus antitoxin to the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 1389.

Hunt, Reid, reports tetanus antitoxin included in the Ph. Belg., Ph. Fr. and Ph. Helv.—Proc. Am. Pharm, Ass. 1910, v. 58, p. 772.

Yarbrough, Charles C., discusses the nature and the use of antitetanic serum.—Western Druggist, 1910, v. 32, p. 126.

Frouin, Albert, comments on variations in hæmolytic power of serum, and production of tetanus antitoxin in thyroidless animals.—Compt. rend. Soc. Biol. 1910, v. 69, p. 237.

Henseval (Bul. Serv. santé et hygiène, 1909, 298–312) discusses the control of antitetanic serum as to antitoxic power, the two methods most employed being the German (Ehrlich) and the American; and preventive power.—Bull. Soc. roy. pharm. Brux. 1910, v. 54, pp. 71–75.

Hitchens, A. Parker, discusses the preventive dose of tetanus antitoxin for the horse and its relation to the American unit. He concludes (1) that tetanus antitoxin as a preventive of tetanus in the horse is as nearly perfect as anything in biology can be; (2) that a very small quantity of tetanus antitoxin is sufficient to protect a horse against an ordinary infection; (3) that clinical experience proves a dose of 500 units to be amply sufficient for practically all cases.—Am. Vet. Rev. 1910, v. 37, pp. 597–609.

Thomas, J. L., presents a note on the prophylactic treatment of dirty wounds by tetanus antitoxin with the report of 3 cases.—Brit. M. J. 1910, v. 1, p. 1267.

Rowan, Charles J., presents a paper on the prophylactic use of tetanus antitoxin.—J. Am. M. Ass. 1910, v. 54, p. 533.

Caffrey, A. J., reports a case of tetanus successfully treated with large quantities of antitoxin.—*Ibid.* v. 55, p. 1643.

Renton, J. Crawford, reports 2 cases of acute tetanus treated successfully by antitetanic serum.—Brit. M. J. 1910, v. 2, p. 1910.

Choupin treated successfully a grave case of tetanus by injecting the serum into the cerebral ventricles, as a last resort.—J. pharm. et chim. 1910, v. 1, p. 42.

Colie, Edward M., jr., reports that he has used tetanus antitoxin as a prophylactic measure against hay fever on several occasions without untoward results.—J. Am. M. Ass. 1910, v. 55, p. 42.

The Journal of the American Medical Association (1910, v. 54, p. 2094) presents a decision of the Supreme Court of Minnesota, *in re* death of injured hay-fever patient right after administration of anti-tetanus serum.

Additional references on the use of antitetanic serum in the treatment of tetanus will be found in Index Medicus, and J. Am. M. Ass.

SERUMS.

Mohr, Karl, presents definitions of the nomenclature used in connection with modern serum investigations.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 84–106.

Lüders, Richard, reviews the progress of the industry relating to the production of sera and antitoxins.—Chem. Ind. 1910, v. 33, pp. 288–289.

Rosenau, M. J., discusses the Federal control of serums, vaccines, etc.—J. Am. M. Ass. 1910, v. 54, p. 249.

The New York Correspondent (Lancet 1910, v. 178, p. 540), calling attention to the new regulations for the Federal control of serums and vaccines, states that the result to the practicing physician has been most satisfactory, for he is no longer liable to get negative results in the use of the serums on the market in any part of the United States.

A list of the licensed manufacturers and importers of serums is reprinted.—Am. Druggist, 1910, v. 56, p. 51.

Yvon, P., discusses the law of April 25, 1895, relative to the preparation, sale and distribution of therapeutic serums and other analogous products, and criticizes the provisions of the Ph. Fr. V.—J. pharm. et chim. 1910, v. 1, pp. 90–96.

An editorial (Am. Druggist, 1910, v. 56, p. 162) discusses vaccines and sera, their objects and uses.

Yarbrough, Charles C., discusses the nature and the production of serums and vaccines.—Western Druggist, 1910, v. 32, pp. 121–128.

Hemm, Francis, thinks that every progressive pharmacist should acquaint himself with the nature and properties of serums. There is too much at stake here to be indifferent about these matters.—Proc. Missouri Pharm. Ass. 1910, p. 102.

Christman, F. L., discusses serum therapy, the standardization of bacterins and the use of tuberculin.—Proc. Texas Pharm. Ass. 1910, pp. 131–136.

Fränkel and Elfer outline a method for drying serum at ordinary temperatures by the use of exsiccated sodium sulphate.—Biochem. Ztschr. 1910, v. 28, pp. 330–331.

Strzyzowski, Casimir, discusses the ability of the animal organism to produce polyvalent precipitating sera.—Pharm. Post, 1910, v. 43, p. 462.

Meyer, F., reviews the basis and the successes of serum therapy. He also reviews, briefly, the several sera that are being used at the present time.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 66–83. See also Ztschr. ang. Chem. 1910, v. 23, pp. 568–569, Pharm. Post 1910, v. 43, pp. 161–163, and Sc. Am. Suppl. 1910, v. 69, p. 71.

Hektoen, Weaver and Tunnicliff presents a preliminary report of investigations of serums and vaccines for streptococcus, staphylococcus, and pneumococcus infections.—J. Am. M. Ass. 1910, v. 54, p. 257.

Eve, Frank C., contributes a note on the utility of the antilytic power of horse serum.—Lancet 1910, v. 178, p. 1753; also v. 179, p. 60.

Neufeld, F., reports observations and reviews the literature relating to the influence of normal and immune sera on phagocytosis.—Arb. a. d. k. Gsndhtsamte. 1910, v. 33, pp. 580–604.

Wyatt, Harold, asserts that the oral administration of sera and vaccines is frequently resorted to nowadays, and presents a number of observations on the preservation of sera in mixtures.—Brit. & Col. Drug. 1910, v. 58, p. 446.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 329–343) reviews the literature of the year relating to sera and antigens.

Additional references on sera and their uses will be found in the Index Medicus, J. Am. M. Ass., and Biochem. Centralbl.

ANAPHYLAXIS.

Anderson and Frost report additional studies on anaphylaxis with special reference to the antibodies concerned.—Bull. No. 64, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 56. See also J. Med. Research, 1910, v. 23, pp. 31–69 and editorial, J. Am. M. Ass. 1910, v. 55, p. 1118.

Schultz, W. H., in a series of physiological studies in anaphylaxis, discusses (I) the reaction of smooth muscle of the guinea-pig sensitized with horse serum.—J. Pharmacol. & Exper. Therap. 1910–11, v. 1, p. 549.

(II) the reaction of smooth muscle from guinea-pigs rendered tolerant to large doses of serum.—*Ibid.* v. 2, p. 22.

(III Schultz and Jordan), a microscopic study of the anaphylactic lung of the guinea-pig and mouse.—*Ibid.* v. 2, p. 375.

Miller and Root report observations on serum sickness and sudden death following the hypodermic administration of antitoxin.—Therap. Gaz. 1910, v. 34, pp. 82–85.

Marbé and Rachewski contribute several studies on anaphylaxis.—Compt. rend. Soc. Biol. 1910, v. 69, pp. 529, 531.

Lesné and Dreyfus comment on the influence of the route of introduction of the activating substance in the production of anaphylactic phenomena.—*Ibid.* v. 68, p. 1072.

Auer and Lewis discuss the cause of death in acute anaphylaxis in the guinea pig.—*Ibid.* v. 68, p. 99.

Moss, W. L., presents a note on a cutaneous anaphylactic reaction as a contraindication to the administration of antitoxin.—J. Am. M. Ass. 1910, v. 55, p. 776.

An editorial (*Ibid.* p. 1649) discusses untoward effects of therapeutic serums with special reference to the recent literature. See also Med. Rec. 1910, v. 78, p. 539, and Brit. M. J. 1910, v. 1, p. 1254.

An editorial (Lancet, 1910, v. 179, p. 1224) reviews some of the recent literature on anaphylaxis.

Meltzer, S. J., contributes a note on bronchial asthma as a phenomenon of anaphylaxis.—J. Am. M. Ass. 1910, v. 55, pp. 1021–1024.

The editor of the Therapeutics Column (J. Am. M. Ass. 1910, v. 55, p. 1202) discusses anaphylaxis in its relation to treatment.

Pater (Monit, thérap. Apr. 4, 1910) calls attention to the dangers of serum therapy.—Rép. pharm. 1910, v. 22, p. 256.

Besredka, A., states that an anaphylactic guinea pig passes rapidly into an antianaphylactic state if it be injected with a very weak dose of serum, under the skin, into the peritoneum or into the veins, in 3 hours in the first instance, in one hour in the second and almost instantaneously in the last.—Compt. rend. Acad. sc. 1910, v. 150, pp. 1456–1458. See also Alexandrescu and Ciuca, Compt. rend. Soc. Biol. 1910, v. 68, p. 687, and Banzhaf and Steinhardt, J. Med. Research, 1910, v. 23, pp. 1–4.

For additional references on anaphylaxis see Chem. Abstr., Zentrlbl. Biochem. u. Biophysik., Compt. rend. Soc. Biol., J. Am. M. Ass., and Index Medicus.

IMMUNITY.

May, James V., presents the modern conception of immunity to disease.—N. York M. J. 1910, v. 91, pp. 697–701.

Leary, Timothy, discusses immunity with special reference to vaccine therapy.—Boston M. & S. J. 1910, v. 163, pp. 527–532.

An editorial (J. Am. M. Ass. 1910, v. 54, p. 973) discusses the application of immunology to biologic problems.

Eccles, R. G., discusses immunity reactions as products of natural selection.—Med. Rec. 1910, v. 78, pp. 1135–1144.

Camus and Gley report the results of their investigations on immunization against toxic serums.—J. physiol. et path. gén. 1910, v. 12, pp. 781–795.

Andrewes, F. W., discusses the behavior of the leucocytes in infection and immunity.—Lancet, 1910, v. 178, pp. 1737–1743; v. 179, pp. 8–16, 83–91, 153–158.

Dalrymple, W. H., discusses the use of immunizing agents and therapeutic sera in veterinary medical practice.—Am. Vet. Rev. 1910–11, v. 38, pp. 511–517.

Briot and Dopter discuss the pathogeny and means of preventing the accidents observed in the course of immunizing horses against meningococcus.—Compt. rend. Soc. Biol. 1910, v. 69, pp. 10, 126, 166, 174.

Frouin, Albert, outlines the distribution of the antitoxin in the fluids and secretions of immunized animals.—*Ibid.* p. 29.

Thomas, B. A., presents the results of three years experience in bacterial immunization with a tabular statement of 106 cases and numerous charts.—J. Am. M. Ass. 1910, v. 54, pp. 362–372.

MacWatters, J. Courtenay, presents some points relating to therapeutic immunization.—Brit. M. J. 1910, v. 1, pp. 1161–1164.

Baldwin, Edward R., presents studies in immunity to tuberculosis: (a) hypersusceptibility or anaphylaxis.—J. Med. Research, 1910, v. 22, pp. 189–256.

Pottenger, F. M., presents a communication on immunity in tuberculosis considered from both the experimental and clinical standpoint.—Med. Rec. 1910, v. 77, pp. 1042–1046.

Lieb, Clarence W., presents a contribution on immunity production in rabbits by the inoculation of increasing numbers of living virulent bovine tubercle bacilli.—J. Med. Research, 1910, v. 22, pp. 75–89.

Beebe, S. P., presents a communication on artificial immunization in non-bacterial diseases.—J. Am. M. Ass. 1910, v. 55, pp. 1712–1717.

For additional references on immunity see J. Am. M. Ass. and Index Medicus.

OPSONIC INDEX.

An editorial (Brit. M. J. 1910, v. 1, p. 225) on the opsonic index, discusses the recent work of Harvey and McKendrick published in *Biometrika.* While it would seem that the method will probably be utilizable by but a small class of observers, this does not detract from the real value of the work accomplished.

Hamilton, Alice, presents a note on the opsonic index of bacillus-carriers.—J. Am. M. Ass. 1910, v. 54, p. 704.

Clemenger, F. G., describes and illustrates a combined opsonizer and incubator.—*Ibid.* p. 614.

Pettit, R. T., outlines a dilution method for the administration of bacterins which he claims permits a species of standardization.—*Ibid.* v. 55, p. 1221.

VACCINE THERAPY.

Walker, Henry Freeman, suggests the term "viroid" as preferable to vaccine, for serums other than those of bovine origin.—J. Am. M. Ass. 1910, v. 55, p. 42.

Stewart, Ian Struthers, presents a paper on vaccines, their preparation and administration.—Pharm. J. 1910, v. 31 (85), pp. 661–662, 725–727.

Wright, Almroth E., discusses vaccine therapy: its administration, value and limitations.—Lancet, 1910, v. 179, pp. 863–874. For discussion see *Ibid.* pp. 885–889; also editorial p. 954. See also editorial summary, N. York M. J. 1010, v. 92, p. 680.

The editor of the Therapeutics Column (J. Am. M. Ass. 1910, v. 55, pp. 1116–1117) discusses vaccine therapy, calling attention to the paper of Tileston (Boston M. & S. J. 1910, v. 162, pp. 373–380).

Smith, Theobald, discusses the experimental basis for vaccine therapy.—Boston M. & S. J. 1910, v. 163, pp. 275–278.

Sherman, G. H., reports three years' experience in general practice with bacterial vaccines.—N. York M. J. 1910, v. 91, pp. 1049–1055.

Adami, J. G., presents a paper on the basal principles of vaccine therapy.—J. Am. M. Ass. 1910, v. 54, pp. 1922–1925.

Miller, E. C. L., discusses the nature and some of the possible uses of bacterial vaccines.—Therap. Gaz. 1910, v. 34, pp. 383–386.

An abstract of the symposium on vaccine therapy before the Association of American Physicians is reproduced in the J. Am. M. Ass. 1910, v. 54, p. 1892.

Deaver, DaCosta and others discuss (before the Am. Surg. Ass.), vaccine therapy as an adjunct to surgery.—*Ibid.* v. 55, p. 160.

Williams, Cragin and Newell submit a number of tentative conclusions concerning the value of vaccine therapy in gynæcology and obstetrics.—*Ibid.* v. 54, p. 2092.

Harford, M. S., contributes a note on the common cold: its modern treatment by a culture of mixed nasal and laryngeal secretions.—Lancet, 1910, v. 178, p. 1165.

Weeks, John E., presents the status of vaccine and serum therapy in ophthalmology.—J. Am. M. Ass. 1910, v. 55, pp. 265–270.

Richardson, Mark W., discusses the general principles of vaccine therapy.—*Ibid.* v. 54, p. 255.

Mattam, A. E., discusses vaccine therapy and the treatment of follicular mange.—Vet. J. Lond. 1910, v. 17, pp. 33–37.

For additional references on vaccine therapy see J. Am. M. Ass. and Index Medicus.

ARTIFICIAL SERUM.

An editorial foot note points out that the term serum applied to solutions other than a serum extracted from the blood of an animal, should be considered improper.—Rép. pharm. 1910, v. 22, p. 18.

An abstract (Vierteljahrsschr. f. prakt. Pharm. 1910, H. 2, 154) presents a number of formulas for artificial serum including the formula in the Ph. Belg. III and the formulas suggested by Hérard, Howell and Leclarq.—Pharm. Zentralh. 1910, v. 51, p. 1014.

Huchard (Gaz. hebd. sc. méd. Bordeaux, Oct. 10, 1909) points out that injections of serum so-called (saline solutions) are (1) frequently dangerous in renal and cardiac affections; (2) useless or harmful in acute affections; (3) of doubtful value in most of the intoxications, becoming dangerous in case of concomitant renal lesions (eclampsia, uræmia, intoxication, burns, etc.); (4) excellent where there is abundant hæmorrhage, and in general in all affections where there is a dehydration of the organism.—Rép. pharm. 1910, v. 22, p. 19.

Fleig asserts that ordinary water has a diuretic action much more intense than that of saccharine solutions (glucose, lactose, saccharose, mannite) or salines, whether isotonic or hypertonic. In case of healthy gastro-intestinal mucosa, ingestion or injection of large quantities of ordinary water should be preferred to saccharine or saline solutions. For the injured mucosa, hypotonic solutions, saline or saccharine, ingested or injected, are indicated (NaCl 4–5: 1000; glucose 15–25; lactose or saccharose 30–40). In case of possible chloride retention, hypotonic saccharine solutions, particularly those of glucose are alone to be employed, for ingestion or injection.—J. pharm. et chim. 1910, v. 2, p. 282.

Le Play, A., discusses the comparative action of repeated injections of isotonic solutions of ascitic fluid and of physiologic serum (saline).—Compt. rend. Soc. Biol. 1910, v. 69, p. 457.

CHOLERA.

Hewlett, R. Tanner, presents a note on the treatment of cholera Asiatica with an antiendotoxic serum, with reports of nine cases, five of which recovered.—Lancet, 1910, v. 179, p. 1212.

Jegunoff, A. (Wien. klin. Wchnschr. 1909, No. 24) reports on the influence of intravenous injections of antitoxic serum of cholera during the course of the cholera affection with somewhat doubtful results. He thinks that in addition to sero-therapy, symptomatic treatment is indispensable.—Nouv. remèdes, 1910, v. 26, p. 219.

Ruffer and Willmore present a paper on the serum treatment of dysentery, with notes on the bacteriological diagnosis of dysentery.—Brit. M. J. 1910, v. 2, pp. 1519–1522.

GONOCOCCUS INFECTIONS.

Stellwagen, Thomas C., reports observations on the treatment of gonorrhœal infections by antigonococcus serum. He points out in his conclusions that while acute and chronic urethritis do not yield to serum treatment, the use of serum renders the patient more readily amenable to local treatment.—Therap. Gaz. 1910, v. 34, pp. 248–252. See also editorial, *Ibid.* pp. 256–257.

Zigler, M., reports three cases successfully treated with antigonococcus serum.—Med. Rec. 1910, v. 78, p. 674.

Thomas, Benjamin A., discusses the status of therapy by antigonococcus serum, gonococcus bacterin and pyocyaneus bacterin.—J. Am. M. Ass. 1910, v. 54, p. 258.

An abstract (J. Adv. Therap. 1910, v. 28, p. 52) calls attention to a paper by Swineburne in the Medical Record on "The Therapeutic Value of the Antigonococcic Serum and Gonococcic Vaccines."

Schmidt, Louis E., discusses the gonorrhœal vaccine treatment and the antigonococcic serum in reference to gonorrhœa and its complications, with particular reference to joint involvements, and reports a number of cases treated with serum and vaccine.—Therap. Gaz. 1910, v. 34, pp. 609–620.

Jamieson, W. R., discusses the dosage of gonococcic vaccine, and the remedial measures to be used with it.—*Ibid.* pp. 311–315.

Tuttle, Albert L., reports the successful treatment of a case of specific salpingitis with gonococcus vaccine.—Med. Rec. 1910, v. 77, p. 405.

Lake, George B., presents a note on Neisser bacterin in chronic gonorrhœal urethritis.—J. Am. M. Ass. 1910, v. 54, p. 611.

Watson, David, contributes a note on the treatment of gonorrhœal and mixed infections of the female genital tract by lactic acid bacilli.—Brit. M. J. 1910, v. 1, p. 192.

Persson, G. A., makes a preliminary report on 34 cases of chronic specific urethritis treated with a culture of lactic acid bacillus.—Med. Rec. 1910, v. 78, p. 534.

MENINGOCOCCUS INFECTIONS.

An abstract (J. Adv. Therap. 1910, v. 28, p. 52) calls attention to the paper by Flexner on the "Present Status of Serum-therapy of Epidemic Cerebrospinal Meningitis."

An editorial (Brit. M. J. 1910, v. 1, p. 1505) discusses the work of the Rockefeller Institute in the production and distribution gratis of antimeningitis serum, and notes that its effective employment is likely to be restricted on account of the experience and skill required in its administration and the high cost of the commercial product.

Weaver, John J., reports a case of epidemic cerebro-spinal meningitis, treated by Flexner and Jobling's serum: recovery.

Marsh, N. Percy, appends a statistical study on the same subject.—Lancet, 1910, v. 178, p. 1068.

Bagley, Charles, reports 6 cases of cerebrospinal meningitis treated successfully with antimeningitic serum.—N. York M. J. 1910, v. 91, pp. 534–596.

Morris, J. Stewart, reports a case of meningitis of the spine and base of brain following capillary bronchitis successfully treated by pneumococcus vaccine.—Boston M. & S. J. 1910, v. 162, p. 535.

Dopter, Ch., discusses the comparative bacteriolytic action of antimeningococcic serum on meningococci and similar germs by intravenous injection.—Compt. rend, Soc. Biol. 1910, v. 69, p. 524.

Bourdinière presents a study of the precipitin reaction for the diagnosis of cerebro-spinal meningitis.—Bull. Soc. sc. et méd. d. l'Ouest, 1910, v. 19, pp. 169–172.

Chevrel, F., concludes that the serum treatment of cerebro-spinal meningitis should be based upon indications furnished by the bacteriologist.—*Ibid.* pp. 236–241.

PNEUMOCOCCUS INFECTIONS.

Neufeld and Haendel, in a further contribution on pneumococcus serum, discuss the occurrence and the importance of atypical varieties of pneumococci.—Arb. a. d. k. Gsndhtsamte. 1910, v. 34, pp. 293–304.

Craig, Henry A., reports 6 cases of pneumonia in the aged, treated with pneumococcus vaccine; recovered.—Med. Rec. 1910, v. 77, p. 259. See also editorial, Lancet 1910, v. 178, p. 809

STREPTOCOCCUS INFECTIONS.

An unsigned article (Therapist, Lond., 1910, v. 20, p. 14), in commenting on Aronson's antistreptococcic serum, points out that this serum contains two descriptions of active substance. The one is obtained by the immunization of horses with highly virulent streptococci. The other part is obtained by treatment of the horses with numerous acute affections of the human system without streptococci cultures in the animal.

An editorial (Med. Rec. 1910, v. 77, p. 1097) on antistreptococcus therapy in scarlet fever, discusses the work of Jochmann and Michaelis (Berl. klin. Wchnschr. May 16, 1910).

Weaver, George H., discusses the effects of injections of killed streptococci, which he thinks may raise the resistance to living virulent streptococci.—Am. J. M. Sc. 1910, v. 140, pp. 422–426.

Smith, Richard M., discusses scarlet fever prophylaxis with streptococcus vaccine, with a summary of a large number of cases taken from the literature.—Boston M. & S. J. 1910, v. 162, pp. 242–245.

RABIES.

Stimson, A. M., presents a comprehensive review of facts and problems of rabies.—Bull. No. 65, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 90, plates 5. See also J. Am. M. Ass. 1910, v. 54, p. 266, J. Med. Research, 1910, v. 23, pp. 511–515, and editorials, Lancet, 1910, v. 179, p. 1093, and N. York M. J. 1910, v. 92, p. 528.

Frothingham, Langdon, discusses the history, prevalence and prevention of rabies and its relation to animal experimentation.—J. Am. M. Ass. 1910, v. 54, pp. 780–784. See also editorial, p. 799.

Simonds, J. P., presents an interesting report on 3 years of rabies in Indiana.—Med. Rec. 1910, v. 77, p. 964.

Viala, Jules, préparateur in the antirabic department of the Pasteur Institute, has published the statistics of the antirabic vaccinations performed during the year 1909. Among the 467 persons who received this treatment there were two deaths from rabies, one of these patients being a woman in whom the disease declared itself during the treatment.—Lancet 1910, v. 178, p. 1791. See also *Ibid.* v. 179, pp. 1453, 1504.

Nicolau, G., presents a note on the natural hæmolytic antibodies in domestic animals and their estimation, with special reference to a simplification of the classic method of Wassermann.—Compt. rend. Soc. Biol. 1910, v. 68, p. 902. See also v. 69, p. 266.

Marinesco, G., comments on the constancy of the lesions of the fibrillary apparatus of the nerve cells in human rabies and their diagnostic value.—Compt. rend. Soc. Biol. 1910, v. 68, p. 898.

Busila, V., contributes a note on the Bordet-Gengue method applied to the study of an organism isolated from rabies virus.—*Ibid.* p. 184.

Additional references on the production and use of antirabic virus will be found in Hyg. Rundschau, J. Am. M. Ass., and Index Medicus.

SYPHILIS.

Butler, William J., discusses the serum and precipitate reactions for syphilis and their clinical value.—J. Am. M. Ass. 1910, v. 54, p. 1114.

An editorial (Brit. M. J. 1910, v. 1, p. 278) discusses the serum reaction in syphilis. With reference to prognosis, practically all authors agree that the change from positive to negative by the treatment and the want of an accurate method of measuring the degree of the reaction render it dangerous to form any opinion as to the future course of a syphilitic infection on the basis of the reaction.

Gurd, Fraser B., presents newer methods of demonstrating the *Treponema pallidum* with especial reference to the india ink method.—J. Am. M. Ass. 1910, v. 54, p. 1779.

v. Wassermann, A., discusses the nature and the practical value of serum diagnosis for syphilis.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 302–315. See also Brit. M. J. 1910, v. 2, pp. 1427–1430.

A book review calls attention to "Serum Diagnosis of Syphilis and the Butyric Acid Test for Syphilis," By Hideyo Noguchi, Associate member of the Rockefeller Institute for Medical Research, New York. 14 illustrations. Philadelphia and London: J. B. Lippincott Company.—Am. J. Pharm. 1910, v. 82, p. 542.

Bulson, Albert E., discusses the Noguchi serum reaction for syphilis as an aid to diagnosis in eye lesions.—J. Am. M. Ass. 1910, v. 55, p. 181.

Seydel, F., discusses the sero-diagnosis of syphilis (Wassermann reaction).—Pharm. Ztg. 1910, v. 55, p. 66.

Bassett-Smith, P. W., contributes a brief note on Fleming's method for the application of the serum diagnosis of syphilis.—Brit. M. J. 1910, v. 1, p. 632.

Garin and Laurent contribute a paper on the value of the Wassermann reaction, with serum and with the different liquids of the organism.—J. physiol. et path. gén. 1910, v. 12, pp. 553–562.

In a subsequent paper, they discuss the comparative value of the reactions of Wassermann, Bauer-Latapi and Porgès; the latter, while distinctly valuable in some particulars are inferior to that of Wassermann.—*Ibid.* pp. 580–584.

An unsigned article (Pharm. Ztg. 1910, v. 55, pp. 223–224) reviews several recent contributions on the Wassermann reaction.

Leopold, R. S., discusses the serum diagnosis of syphilis and reports a study of 176 cases.—Hahnemann. Month. 1910, v. 45, pp. 120–128; also pp. 670–676.

Swift, Homer F., discusses the effect of treatment on the Wassermann reaction and presents a number of tables showing the comparative effect of treatment.—Tr. Am. M. Ass., Sec. Pharm. and Therap., 1910, pp. 171–182.

For additional references on the diagnosis of syphilis see J. Am. M. Ass., and Index Medicus. See also Wassermann reaction, under Clinical Tests.

TYPHOID.

An editorial (Boston M. & S. J. 1910, v. 163, p. 104) discusses favorably the advisability of antityphoid inoculation.

Spooner, Lesley H., reports on antityphoid inoculation as conducted at the Massachusetts General Hospital.—Boston M. & S. J. 1910, v. 162, pp. 37–40. See also editorial p. 56.

Hartsock, Frederick M. (U. S. A.) reports the result of antityphoid vaccination, based upon 1,100 inoculations.—J. Am. M. Ass. 1910, v. 54, p. 2123. See also *Ibid.* v. 55, p. 1169, and Med. Rec. 1910, v. 77, p. 582; editorials N. York M. J. 1910, v. 91, p. 757, and *Ibid.* v. 92, 871, 979.

An editorial (Med. Rec. 1910, v. 78, p. 1101) summarizes the results of 11,771 typhoid vaccinations in the U. S. Army and states that, roughly, the incidence among the unvaccinated was nearly sixteen times higher than among the vaccinated.

Vincent, H., discusses the experimental bases of antityphoid vaccination.—Compt. rend. Acad. sc. 1910, v. 150, pp. 355–357.

In a subsequent note he concludes that the best method of immunizing man against typhoid consists in the employment of autolysates of living bacilli. Three injections are necessary in progressively increasing doses.—*Ibid.* pp. 482–484.

Rodet and Lagriffoul report clinical results in the serotherapy of typhoid fever.—Compt. rend. Soc. Biol. 1910, v. 68, p. 605. Also Compt. rend. Acad. sc. 1910, v. 150, pp. 741–743.

Anders, James M., presents a note on the use of typhoid vaccines in typhoid fever, with tabulated blood findings in 6 cases.—J. Am. M. Ass. 1910, v. 55, p. 2023. See also Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, pp. 84–91.

Hollis, Austin W., reports on the treatment of 11 cases of typhoid fever with vaccine. From theory alone, he predicts a brilliant future for typhoid vaccine as a protective, as well as a therapeutic agent.—Med. Rec. 1910, v. 78, p. 622.

An editorial (*Ibid.* v. 78, p. 239) discusses Mandelbaum's reaction in the detection of typhoid carriers, and in the differentiation of typhoid fever, with special reference to recent work of Gaetghens and Kamm (Münch. med. Wchnschr. June 28.)

Stone, Willard J., discusses the treatment of typhoid bacillus-carriers, with the report of a case treated by inoculation of typhoid vaccine.—J. Am. M. Ass. 1910, v. 55, pp. 1708–1711.

Sappington, S. W., presents studies in typhoid vaccines and opsonins. He feels that there is every indication for further investigation of the value of bacterial vaccines in the treatment of typhoid fever and the role played by opsonins.—J. Med. Research, 1910, v. 22, pp. 435–460.

Bass and Watkins present a quick macroscopic typhoid agglutination test.—Arch. Int. Med. 1910, v. 6, pp. 717–729.

Frost, W. H., reports observations on an organism, *Pseudomonas protea,* isolated from water, agglutinated by the serum of typhoid fever patients.—Bull. No. 66, Hyg. Lab. U. S. P. H. & M.—H. S. 1910, pp. 27–75.

VENINS.

Noguchi, Hideyo, presents a communication on antivenins.—J. Am. M. Ass. 1910, v. 54, pp. 264–266.

Strawska, B. (Compt. rend. Acad. sc. 150, 1539) reports observations on cobra venin and antivenin serum.—Chem. Abstr. 1910, v. 4, p. 2522.

CANCER.

Hodenpyl, Eugene, presents a preliminary communication on the treatment of carcinoma with the body fluids of a recovered case.—Med. Rec. 1910, v. 77, p. 359. See also editorials p. 368 and p. 932, and Boston M. & S. J. 1910, v. 162, p. 363.

Weil, Richard, discusses the properties of ascitic fluids, especially in cases of cancer. His experiments have not indicated the existence of any specific character, such as would serve to differentiate with certainty fluids derived from cancerous individuals from those of another origin. He feels that the problems of immune reactions must be conducted along other lines.—J. Med. Research, 1910, v. 23, pp. 85–94.

Duncan, Harry A., discusses the bacterial treatment of malignant disease, with report of 10 cases.—N. York M. J. 1910, v. 91, p. 1055.

Walker, Charles, presents a note on the effects of a serum upon a carcinoma occurring in mice.—Lancet, 1910, v. 178, p. 990.

Leitch, Archibald, contributes a note on experimental diminution of resistance to mouse cancer.—*Ibid.* p. 991.

Vaughn, J. W., presents a note on sensitization in cancer, with a report of 2 cases.—N. York M. J. 1910, v. 91, p. 1057.

SEVUM PRÆPARATUM.

The Chem. & Drug. (1910, v. 77, p. 899) notes that a peculiar feature of the Ph. Germ. V monograph on sevum is that only a brief description is given, with the remark that the preparation must meet the requirements set forth in the special laws affecting this substance.

Lucas and Bird outline a proposed monograph for prepared suet and limits for saponification value, iodine value, refractive index at 60°, and free acid.—Brit. & Col. Drug. 1910, v. 58, p. 317. Also Pharm. J. 1910, v. 31 (85), p. 472.

Strunk calls attention to the changes in suet produced by heat.—Pharm. Zentralh. 1910, v. 51, p. 135.

Mittelbach, William, notes that suet should mean the purified article.—Proc. Missouri Pharm. Ass. 1910, p. 98.

Hemm, Francis, states that prepared suet is gradually passing into disuse. Its great tendency to rancidity, even if well prepared, makes it desirable to replace it wherever possible by some other modern and bland vehicle, like firm petrolatum or lanolin.—*Ibid.* p. 102.

SINAPIS.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 54) point out that the Ph. Germ. V requires that mustard contain at least 0.7 per cent of volatile oil.

Evans, J., points out that the microscopic examination of powdered mustard shows it to consist mainly of soft parenchymatous cells without any starch granules. The presence of starch is a sure indication of the presence of some adulterant.—Brit. & Col. Drug. 1910, v. 57, p. 133.

Rusby, H. H., states that he has met with mustard seed which was very mouldy and musty.—Practical Druggist, 1910, v. 27, p. 424.

LaWall and Bradshaw report finding from 5.3 to 7.5 per cent ash in black mustard, and from 3.6 to 5.2 per cent in yellow mustard.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Murayama, Y., reports on the constituents of the fixed oil of Japanese mustard seed. He concludes that this oil consists principally of the glycerides of arachidic and erucic acids.—J. Pharm. Soc. Japan, 1910, p. 696.

Lenormand, C., contributes a note on the assay of mustard, and comments on the method of the Codex.—Bull. Soc. sc. et méd. d. l'Ouest, 1910, v. 19, p. 87. Also Buol. sc. pharmacol., 1910, v. 17, p. 263.

Caesar & Loretz (Jahres-Ber. 1910, pp. 116–117) outline a modification of the Ph. Germ. IV method of assay for mustard, also call attention to the ethereal oil content requirement included in several of the foreign pharmacopœias.

Mittelbach, Wm., reports that the spreading and preparation of mustard plaster is an art of the past, the formula for mustard plaster may as well be dismissed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 792.

Breves, Rudolph, thinks that for mustard paper a method to determine the volatile oil of mustard and the amount required should be stated.—Practical Druggist, 1910, v. 28, p. 39.

SODII ACETAS.

Seidell, Atherton, reports experimental determinations on the solubility of sodium acetate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 125.7 gm., and 100 gm. of U. S. P. alcohol will dissolve 6.6 gm. of sodium acetate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 19–21, 91.

Sellards, Andrew Watson, in a paper on tolerance for alkalies in Asiatic cholora, states that sodium acetate may have some advantages, especially for the stage of collapse. As much as 80 gm. within 24 hours have been injected, but perhaps this amount is slightly excessive in certain cases.—Philippine J. Sc. 1910, v. 5, B, pp. 363–390.

SODII ARSENAS.

Lukanow, E., discusses the valuation of solution of sodium arsenate.—Apoth. Ztg. 1910, v. 25, p. 122.

Maurel and Arnaud report their observations on the relation between the doses of sodium arsenate which cause diarrhœa, and those which render the urine albuminous; diarrhœa is caused only when the dose is sufficient to alter the kidneys and probably diminish their permeability.—Compt. rend. Soc. Biol. 1910, v. 68, p. 414. See also pp. 129, 170, 608, 675.

SODII BENZOAS.

Seidell and Wilbert call attention to the difficulty of eliminating carbon from the residue left on incinerating sodium benzoate.—Am. J. Pharm. 1910, v. 82, p. 68.

Seidell, Atherton, reports experimental determinations on the solubility of sodium benzoate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 56.24 gm., and 100 gm. of U. S. P. alcohol will dissolve 2.04 gm. of sodium benzoate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 28–31, 91.

McAbee, W. D., reports a number of experiments with the modified LaWall method for the determination of sodium benzoate in catsups.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 544–545.

Dunbar, P. B., reports observations on the quantitative estimation of sodium benzoate.—Proc. Ass. Off. Agric. Chem. 1910, 27th Ann. Conv. pp. 108–115. (Bull. Bur. Chem., U. S., Dept. Agric. 1911, No. 137.)

Long. J. H. (Quart. Bull. Northwestern Univ. Med. Sch., December 1909) discusses food preservatives and the benzoate question.—J. Am. M. Ass. 1910, v. 54, p. 654.

Lucas Daniel R., presents an extensive study of some of the effects of sodium benzoate with tabulated results and his conclusions.—*Ibid.* pp. 759–766.

Herter, C. A., discussing some alleged effects of sodium benzoate and benzoic acid, criticises the paper by D. R. Lucas.—*Ibid.* pp. 1774–1776.

Dakin, H. D., states that sodium benzoate, taken by men in doses of 5 to 10 gm. daily for two or three days, undergoes a practially complete conversion into hippuric acid and is eliminated as such in the urine.—J. Biol. Chem. 1910, v. 7, p. 108.

Herter, C. A. ([New York], 1910, pp. 18), in a publication on the action of sodium benzoate and benzoic acid on the human organism, replies to criticisms which have been made of the report of the Referee Board appointed to study the action of sodium benzoate, and gives reasons for his belief that the conclusions of this board are reliable and trustworthy.—Exper. Sta. Rec. 1910, v. 23, p. 669. See also J. Biol. Chem. 1910, v. 7, p. 67.

An editorial (Critic and Guide, 1910, v. 13, p. 221) comments on the attempted suppression of the work done by Herter in connection with sodium benzoate.

An unsigned article (Midl. Drug. 1910, v. 44, pp. 157–172) discusses the benzoate dragon and calls attention to some misrepresentations that have been made in connection with the use of benzoic acid and sodium benzoate as preservatives.

Gerlach, V. (Wiesbaden, 1909) discusses the physiologic action of benzoic acid and sodium benzoate, and concludes that prohibition of these products as food preservative agents would not be justified.—Nouv. remèdes, 1910, v. 26, p. 490.

Barnard, H. E., discusses the use of sodium benzoate as a preservative in food and concludes that the available evidence relegates sodium benzoate to the shelves of the laboratory by the side of borax, salicylic acid and formaldehyde.—Chem. Eng. 1910, v. 12, pp. 104–107.

An editorial (Northwestern Druggist, 1910, v. 11, Feb., p. 23) comments on "Returning Sanity on the Use of Preservatives." See also *Ibid.* pp. 15–16, and *Ibid.* March, p. 15.

A summary of State and Federal rulings as to the use of sodium benzoate, coal tar colors and saccharin in food products, is reprinted.—Drug Topics, 1910, v. 25, pp. 54–55. See also J. Soc. Chem. Ind. 1910, v. 29, p. 513.

SODII BICARBONAS.

Finlay, Robert Hugh Forsythe, in U. S. patent 961,945, describes a method for the manufacture of sodium bicarbonate.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 368–369.

Bicher discusses the constitution of sodium bicarbonate.—Chem. Ztg. 1910, v. 34, pp. 765–766.

Riedel's Berichte (1910, p. xxviii) points out that the test for monocarbonate by means of normal hydrochloric acid should not be conducted too rigorously; even the best commercial varieties do not yield a water clear solution after the addition of 0.2 cc. of the acid.

Puckner and Warren report on the estimation of sodium bicarbonate in mixtures with caffeine and acetanilide according to the method suggested by W. O. Emery.—Rep. Chem. Lab. Am. M. Ass. 1910, v. 3, p. 50.

Einhorn and Rosenbloom, in a study of the duodenal contents in man, find sodium bicarbonate has a stimulative rather than an inhibitory action.—Arch. Int. Med. 1910, v. 6, pp. 665–676.

Sellards, Andrew Watson, in a paper on tolerance for alkalies in Asiatic cholera, states that, as a general routine, sodium bicarbonate has been the most effective. Early in the stage of reaction, at least as much as 60 gm. may readily be given within 24 hours. The most important indication for discontinuing its administration is the development of muscular twitchings or cramps.—Philippine J. Sc. 1910, v. 5, B, pp. 363–390.

Monroe, A. Leight, quotes Burford who recommends large doses of bicarbonate of soda in the vomiting of pregnancy and describes a typical case in which a coffeespoonful of sodæ bicarb. was taken in half a tumbler of soda water, before each meal.—Hahnemann. Month. 1910, v. 45, p. 470.

Adams, F. X., points out that the indications for sodium bicarbonate are: broad pallid tongue, usually with yellow coating and quite thirsty. Mix in water to a pleasant taste and give frequently a small sip out of the glass.—Eclectic M. J. 1910, v. 70, p. 72.

SODII BISULPHIS.

Lemaire, Paul, discusses the characters, assay and official estimation of solutions of sodium bisulphite.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 267–270.

SODII BORAS.

Dupont, F. M., discusses with illustrations the borax industry of the United States; also calls attention to some of the various uses of borax.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 500–503.

Levi and Castellani (Gaz. chim. ital., 1910, 40, I., 138–176) discuss the technical preparation of borax, more particularly (1) the crystallization of borax, and (2) the reaction between boric acid and sodium chloride.—J. Soc. Chem. Ind. 1910, v. 29, p. 485.

Dohme and Engelhardt state that the Ph. Hung. III requires that 1.91 gm. of borax dissolved in water should require 9.9 to 10.1 cc. of normal acid for neutralization.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

Sayre, L. E., reports on 5 samples of borax: 1 passed; 4 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1095.

Borchers, Friedrich, reports observations on the behavior of sodium borate with zinc salts in aqueous solutions.—Ztschr. anorg. Chem. 1910, v. 68, pp. 269–291.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 16) report that arsenic is the most erratic impurity of borax, and they have found it necessary to reject 4 deliveries out of 55, owing to the presence of upwards of 5 parts per million of this element. Traces of sulphates were present in only 2 samples, and the lead content ranged from 0.0005 per cent (pure) to 0.0015 per cent (commercial).

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 27) have confirmed the experience reported last year as to the freedom of boric acid and borax from lead and arsenic; in their experience both are now usually as near as possible free from arsenical contamination, and contain but negligible proportions of lead.

The Local Government Board (38th Ann. Rep. Part II) reports 2, out of 45, samples of borax examined in 1908 not up to standard.—Pharm. J. 1910, v. 30 (84), p. 33.

The Committee of Reference in Pharmacy points out that the directions for making glycerinum boracis should read: "Powder the borax," etc., so as to indicate the use of borax in crystals.—Brit. & Col. Drug. 1910, v. 58, p. 13.

An editorial on preservatives and press agents (J. Am. M. Ass. 1910, v. 54, p. 55) calls attention to the effort that has been made to attribute cases of ptomaine poisoning to failure to use chemical preservatives in food stuffs.

SODII BROMIDUM.

Dohme and Engelhardt state that the Ph. Hung. III test for the purity of sodium bromide is similar to that given under potassium bromide.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

Whitney, D. V., reports examining 2 samples of sodium bromide; one contained bromate.—Proc. Missouri Pharm. Ass. 1910, p. 107.

Bolgar, Georg, discusses the rapidity of bromine resorption in the intestine.—Arch. internat. pharmacodyn. et thérap. 1910, v. 20, pp. 75–96.

SODIUM CACODYLATE.

Zeno reviews some of the history of cacodylic acid and of sodium cacodylate.—Pharm. Ztg. 1910, v. 55, p. 1008.

Hunt, Reid, reports that sodium cacodylate is included in the Ph. Fr., Ph. Ital. and Ph. Helv.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

Riedel's Berichte (1910, p. xlvi) presents a monograph giving the composition, properties and tests for sodium cacodylate.

Holmberg, Bror, discusses the amphoteric character of cacodylic acid.—Ztschr. physikal. Chem. 1910, v. 70, pp. 153-157.

SODII CARBONAS MONOHYDRATUS.

Mason, William, describes with illustrations the production of ammonia soda.—Chem. Ztg. 1910, v. 34, pp. 137–138, 150–151.

Vanzetti, L., comments on the history of the ammonia soda process.—*Ibid.* p. 229.

Jurisch, Konrad W., discusses the production of ammonia soda, and presents a comprehensive review with illustrations of the system Mallet-Boulouvard.—Chem. Ind. 1910, v. 33, pp. 346–359, 424–430.

Colson, Albert, reviews the present state and comments on the future of ammonia soda.—J. Soc. Chem. Ind. 1910, v. 29, pp. 187–192. Also Chem. Eng. 1910, v. 11, pp. 159–163.

Hargreaves, James, is reported as having perfected a modified ammonia soda process which is claimed to be more simple than that now in use.—Oil, Paint and Drug Reporter, 1910, v. 78, July 11, p. 280.

Scoville, W. L., says that sodium carbonate means several things in commerce. On. U. S. P. basis from 34.4 per cent to 97.2 per cent of official. Water of crystallization is, of course, the chief feature in the lower percentages.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 747.

Brown, Linwood A., states that monohydrated sodium carbonate is the only official salt and should be used in all pharmaceutical work. The commercial sodium carbonate contains 10 molecules of water, a portion of which it rapidly loses on exposure to air. The official salt should be kept in well stoppered bottles.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, pp. 144–145.

Dohme and Engelhardt state that the Ph. Hung. III directs that crystalline sodium carbonate be at least 99 per cent pure.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

Eldred, Frank R., reports that lots of the monohydrated salt have been found to vary from 83.5 per cent to 87 per cent of sodium carbonate. Most of the salt sold as dried sodium carbonate is the monohydrated salt.—*Ibid.* p. 897.

Sayre, L. E., reports on 5 samples of sodium carbonate: 1 passed; 4 illegal.—*Ibid.* p. 1098.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 69) report that a sample of decahydrated sodium carbonate crystals exposed to the sun's heat liquefied, and on cooling only partially re-crystallized: the crystals deposited indicated that a transition had occurred, for they had the composition $Na_2CO_34H_2O$, or $Na_2CO_37H_2O$, admixed with $Na_2CO_3H_2O$.

Deiss, Eugen, discusses the use of sodium carbonate as an oxidizing agent.—Chem. Ztg. 1910, v. 34, pp. 781–782.

SODII CHLORAS.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 70) report that 7 samples of sodium chlorate were tested, 3 containing decided traces of sodium chloride; arsenic was invariably below 4 parts per million, and lead below 5 parts per million.

SODII CHLORIDUM.

Winslow, Alfred A., states that the salt beds of Chile could supply the world with salt for ages to come. Salt is found in large bodies 99 per cent pure and only needs grinding to be ready for table use.—Cons. & Tr. Rep. Oct. 24, 1910, p. 317.

Bachman, G., reports that the sodium chloride examined showed a minimum percentage of 98.5, a maximum of 99.46.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Ransford-Gay, St. Claire, discusses the making and marketing of sterile salt solution for surgical use.—Drug. Circ. 1910, v. 54, pp. 107–108.

The formula for physiological salt solution to be included in the Ph. Germ. V is presented for discussion.—Pharm. Zentralh. 1910, v. 51, p. 172.

Barton, Wilfred M., asserts that physiologic salt solution is not a heart stimulant.—J. Am. M. Ass. 1910, v. 55, p. 285.

Joseph and Meltzer present some observations on the physiological action of sodium chloride.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, pp. 271–283. See also *Ibid.* pp. 361–374.

Riesman, David, contributes a note on the treatment of typhoid by continuous saline instillation.—J. Am. M. Ass. 1910, v. 54, p. 374.

Brooks, Harlow, presents a case of fatal sodium chloride poisoning with a brief study of the effects of the excessive administration of salt on the tissues.—Arch. Int. Med. 1910, v. 6, pp. 577–585.

Fornias, E., quotes Wassily who points out that Natrum Mur acts upon the mucous membranes, the stomach, the intestines, the epidermis, and is suitable to anæmic subjects.—Hahnemann. Month. 1910, v. 45, p. 554.

Monroe, A. Leight, quotes Gumpel, who has noticed some interesting facts concerning the medicinal powers of common salt in tropical countries. Schulz has shown that natrum muriaticum will correspond to its indications in a small but material dose.—*Ibid.* p. 471.

For additional references on the chemistry, pharmacology and uses of sodium chloride see Chem. Abstr., Zentrlbl. Biochem. u. Biophysik., J. Am. M. Ass., and Index Medicus.

See also Artificial Serum, p. 702.

SODII CITRAS.

Riedel's Berichte (1910, p. xliv) presents a monograph giving the composition, properties and tests for sodium citrate.

Seidell, Atherton, reports experimental determinations of the solubility of sodium citrate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 92.7 gm., and 100 gm. of U. S. P. alcohol will dissolve 0.0 gm. of sodium citrate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M. H. S. 1910, pp. 45–47, 91.

Langmead, Frederick (Proc. Roy. Soc. Med., May, 1910) reports 80 consecutive cases of wasting infants fed on undiluted citrated milk with beneficial results.—J. Am. M. Ass. 1910, v. 55, p. 150.

SODIUM GLYCEROPHOSPHATE.

Bernegau, L. H., reports that three samples of sodium glycerophosphate tested respectively, 68.76, 74.52 and 76.94 per cent, calculated as $Na_2C_3H_7PO_6H_2O$.—Proc. Pennsylvania Pharm. Ass. 1910, p. 146.

SODII HYDROXIDUM.

Scott, James, describes and illustrates the micro-crystalline structure of caustic soda.—Chem. Trade J. 1910, v. 46, p. 409.

Dohme and Engelhardt state that the Ph. Hung. III directs that sodium hydroxide should contain 90 per cent of absolute sodium hydroxide. The test for purity is outlined.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

Scoville, W. L., asserts that caustic soda runs quite uniform; 85 to 96.4 per cent.—*Ibid.* p. 746.

LaWall, Charles H., asserts that the absence of more than traces of sodium carbonate should be insisted upon in solution of sodium hydroxide, which undergoes a deterioration of this kind quite readily.—Am. J. Pharm. 1910, v. 82, p. 24.

Jorissen and Filippo outline a method for the preparation of concentrated sodium and potassium hydroxide solutions free from carbonates, by means of electrolysis.—Z. angew. Chem. 1910, v. 23, pp. 726–727.

SODII HYPOPHOSPHIS.

Dohme and Engelhardt state that the Ph. Hung. III directs that sodium hypophosphite should contain 90 per cent of hypophosphite. The determination is carried out in a manner similar to that given under potassium hypophosphite.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

Dunning, H. A. B., thinks that the U. S. P., in connection with the copper sulphate test under sodium hypophosphite, should direct that the solution be acidified.—*Ibid.* p. 970.

Patta, Aldo, reports observations on the behavior of the hypophosphites in the organism.—Arch. farmacol. sper. 1910 v. 9, pp. 1–7.

SODII IODIDUM.

Tyrer, Dan, reports observations on the solubility of sodium iodide in ethyl alcohol from the ordinary temperature to the critical point.—J. Chem. Soc., Lond., 1910, v. 97, pp. 624–628.

Dunning, H. A. B., points out that different methods are directed for determining the percentage of strength and the limit of the other halogen salts in the assay for ammonium iodide and sodium iodide.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 969.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 70) report that 3 samples of sodium iodide examined were pure to the extent of 99.7 to 99.8 per cent, sodium chloride varying from 0.2 to 0.3 per cent.

SODII NITRAS.

Winslow, Alfred A., states that the consumption of sodium nitrate in the world for the first eight months of 1910 amounted to 2,125,232 tons, against 1,718,270 tons for 1909. The increase in August amounted to 13 per cent over the same month last year.—Cons. & Tr. Rep. Oct. 24, 1910, p. 317.

An editorial (Brit. & Col. Drug. 1910, v. 57, p. 186) discusses the production of sodium nitrate and presents a table showing the shipments and the world's consumption during the years 1900–1909, inclusive.

Mason, Frank H., in a Consular Report, calls attention to the progress of synthetic nitrate production.—Oil, Paint and Drug Reporter, 1910, v. 78, July 25, p. 28P.

SODII NITRIS.

Miller, Joseph L., details the results of his observations on the use of sodium nitrite for the reduction of hypertension.—J. Am. M. Ass. 1910, v. 54, p. 1667.

Brady, William, states that potassium nitrite is absorbed in about 8 minutes, from the stomach, and is eliminated in 3 hours; it produces much less throbbing in the head than does nitroglycerin, and, unlike the latter, is very stable; hence it may well be given in tablet triturate if desired.—N. York M. J. 1910, v. 91, p. 210.

SODIUM PERBORATE.

Riedel's Berichte (1910, p. xlvi) presents a monograph giving the composition, properties and tests for sodium perborate.

SODII PHENOLSULPHONAS.

Seidell, Atherton, reports experimental determinations on the solubility of sodium phenolsulphonate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 24.1 gm., and 100 gm. of U. S. P. alcohol will dissolve 0.9 gm. of sodium phenolsulphonate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 55–56, 91.

SODII PHOSPHAS.

Brown, Linwood A., points out that sodium phosphate should contain twelve molecules of water of crystallization in order to conform to the U. S. P. It loses 5 molecules on exposure to the air, forming a white powder.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 145.

Riedel's Berichte (1910, p. xxviii) points out that in testing for sulphate it is not unusual that an insufficient amount of acid is added, resulting in strong opalescence consisting of barium phosphate, which dissolves in warm nitric acid.

Ellingwood, Finley, calls attention to the use of sodium phosphate in the treatment of exophthalmic goitre.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 157.

SODII PHOSPHAS EXSICCATUS.

Bradshaw, H. A., says that none of the dried sodium phosphate on the market is U. S. P. It contains 9 to 25 per cent of moisture.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 747.

Eldred, Frank R., reports that the amount of water in a large number of lots of exsiccated sodium phosphate examined, varied from 0.2 per cent to 14.5 per cent.—*Ibid.* p. 897.

LaWall, Charles H., thinks that a method for estimating the moisture, usually found in commercial samples of exsiccated sodium phosphate, is desirable.—Am. J. Pharm. 1910, v. 82, p. 25.

SODII SALICYLAS.

Dohme and Engelhardt state that the Ph. Hung. III requires that 1 gm. of sodium salicylate on incineration yield 0.33 to 0.34 gm. of residue.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1187.

Seidell, Atherton, reports experimental determinations on the solubility of sodium salicylate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 115.3 gm., and 100 gm. of U. S. P. alcohol will dissolve 13.6 gm. of sodium salicylate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S., 1910, pp. 72–73, 91.

Hill, Charles Alexander, contributes a note on the crystallization of sodium salicylate solution.—Pharm. J. 1910, v. 31 (85), p. 730. See also p. 805, and Brit. & Col. Drug. 1910, v. 58, p. 503.

Bachman, G., reports that the sodium salicylate examined showed a minimum percentage of 96.86, a maximum of 98.9.—Proc. Minnesota Pharm. Ass. 1910, p. 63.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 70) report that inferior grades of sodium salicylate examined were found to contain 0.2 to 0.7 per cent of free salicylic acid, the finer qualities only containing 0.04 to 0.05 per cent.

Lucas, E. W., points out that there is no reliable method of distinguishing the natural from the pure synthetic salt.—Brit. & Col. Drug. 1910, v. 58, p. 503.

Brady, William, states that sodium salicylate, so widely employed in tablet form, will unquestionably be found to be more acceptable to the stomach and more certain to be absorbed when administered dissolved in an aromatic water or simple elixir.—N. York M. J. 1910, v. 91, p. 209.

Ghosh, Birendra Nath, presents a note on the local injection of sodium salicylate in acute rheumatism.—Brit. M. J. 1910, v. 1, p. 690.

Allan, John, discussing some points in the treatment of chorea in children, states that in his hands sodium salicylate has been an absolute failure. He thinks the enormous doses advocated by B. B. Lees are very risky.—Am. J. M. Sc. 1910, v. 139, p. 170.

Felter, H. W., thinks that sodium salicylate is unquestionably the oftenest indicated antirheumatic. Only the preparation prepared from true oil of wintergreen should be employed. The synthetic product may prove dangerously depressant to the heart.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 206.

An unsigned article (Critic and Guide, 1910, v. 13, p. 172) states that the addition of a little glycerin to sodium salicylate will make the latter more palatable and also less disturbing to the stomach.

SODII SULPHAS.

Tyrode, Maurice Vejux, concludes that sodium sulphate, sodium phosphate and magnesium sulphate cause purgation by their stimulant effect upon peristalsis through a local reflex in the neuromuscular mechanism emanating from their stimulant action on the mucous membrane, and in a more or less specific manner dependent on their chemical composition.—Arch. internat. pharmacodyn. et thérap. 1910, v. 20, pp. 205–223.

An unsigned abstract (Hom. Envoy) recommends natrium sulph. for green, bitter, bilious condition.—J. Am. Inst. Homœop. 1910, v. 2, p. 138.

SODII SULPHIS.

Duvieusart, F., in French patent 409,524, Nov. 23, 1909, outlines a process for the manufacture of sodium sulphite and its separation (hot) and consecutively the manufacture of ammonium chloride and its separation (cold).—J. Soc. Chem. Ind. 1910, v. 29, p. 757.

Elvove, Elias, suggests the substitution of anhydrous sodium sulphite for the hydrated variety described in the U. S. P., and presents tables showing the degree of purity and the solubility of the anhydrous sodium sulphite obtained from various sources.—Am. J. Pharm. 1910, v. 82, pp. 211–218.

Arny, H. V., reports on 13 samples of sodium sulphite submitted; 1 sample below U. S. P. (took 29.5 cc. N/10 iodine V. S.); 1 sample U. S. P.; and the rest varying from 65.5 cc. to 78.5 cc., being above the U. S. P.; in short, samples of sodium bisulphite.—Proc. Ohio Pharm. Ass. 1910, p. 69.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 70) report that the photographic grades of sodium sulphite are sometimes offered with a purity of only 83 per cent, whereas the purest samples contain 92 to 99.8 per cent.

Cutler, William P., considers sodium sulphite a dangerous preservative, as used in Hamburger and other meats, for the reason that an inferior and sometimes dangerous quality of meat can be sold to the consumer, the chemical hiding the inferiority by making it a bright color and killing the odor, which would cause it to be rejected.—Ann. Rep. Food and Dairy Com. Missouri, 1910, p. 7.

Adams, F. X., points out that the indications for sodium sulphite are: broad, pallid tongue, pasty or glutinous coating, usually white or inclined to yellow. Breath odor strong. Not very thirsty but may be thirsty and wanting to drink frequently.—Eclectic M. J. 1910, v. 70, p. 72.

SPARTEINÆ SULPHAS.

Chevalier, J., reports that sparteine is produced rapidly in scoparius during the early period of vegetation and that it diminishes rapidly at the time of flowering and fruit formation.—Compt. rend. Acad. sc. 1910, v. 150, p. 1068.

Cohn, Georg, discusses the chemistry of oxysparteine.—Pharm. Zentralh. 1910, v. 51, p. 400.

Barton, Wilfred M., asserts that sparteine is of no value in heart disease and is no substitute for digitalis.—J. Am. M. Ass. 1910, v. 55, p. 285.

MacNider, W. de B. (Southern M. J. August, 1910), has found that sparteine produces a rise of general arterial blood pressure, followed by increased output of urine, due probably to an increased local blood pressure in the kidney.—*Ibid.* p. 1148.

Strickler and Fleisher contribute a note on the influence of intravenous injections of sparteine and adrenalin on the heart of the dog.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, pp. 55–57.

SPECIES EMOLLIENTES N. F.

Hallberg, C. S. N., in connection with the report of N. F. Sub-Committee V on emollient species, remarks that this committee evidently does not know the meaning of "Cataplasma."—Bull. Am. Pharm. Ass. 1910, v. 5, p. 28.

SPIGELIA.

Wilbert, M. I., presents a contribution to the history of "pinkroot" as a drug.—Am. J. Pharm. 1910, v. 82, pp. 466–469.

Kraemer, Henry, discusses with illustrations the histology of the rhizome and roots of *Phlox ovata* L. (*P. carolina* L.).—Am. J. Pharm. 1910, v. 82, pp. 470–475. See also Proc. Am. Pharm. Ass. 1910, v. 58, pp. 999–1003.

True, R. H., comments on the adulteration of spigelia.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1004.

Beilstein, Abraham, reports that 4 lots of drug offered as spigelia were found to consist of an unidentified root, while two other lots were of very poor quality.—Proc. N. W. D. A. 1910, p. 106.

Rusby, H. H., states that he has met with spigelia which is in almost every case wholly spurious or largely adulterated.—Practical Druggist, 1910, v. 27, p. 423.

Fornias, E., quotes Wassily who points out that spigelia acts chiefly on the heart, the sensitive nerves and the eyes.—Hahnemann. Month. 1910, v. 45, p. 557.

Monroe, A. Leight, quotes J. B. Brown who states that spigelia is indicated in the treatment of endocarditis when the disease has reached its height, agonizing pains in precordial region, extending over the bronchial plexus of nerves.—*Ibid.* p. 715.

SPIRITUS.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, pp. 342–344) presents a definition for spirits and discusses the nature and method of making the spirits now official in the U. S. P.

Baird, J. W., commenting on the official spirits states that the directions for making them are very simple and there should be no question as to obtaining a product of the required strength of oil. The State Board of Health has however caught many druggists of the state with products not up to the standard strength and a considerable number of prosecutions have been or will be brought.—Proc. Massachusetts Pharm. Ass. 1910, p. 89.

The same author discusses oil in spirits and essences, defines the nature of spirits and outlines a method by means of which the druggist can assure himself that his extract of anise and other extracts are made of the right strength.—Southern Pharm. J. 1909–10, v. 2, pp. 522–523.

Eberle, E. G., thinks it would be advisable to have a general formula for making spirits.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 781.

SPIRITUS ÆTHERIS COMPOSITUS.

Grimes, R. A., states that of 25 samples of compound spirit of ether assayed, only one had the required amount of ethereal oil. Some had none.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 747.

Hill, Edward C., reports one sample of Hoffman's anodyne which was found to be adulterated (lacked ethereal oil).—Bull. Colorado Bd. Health, 1910, v. 10, No. 2, p. 8.

Beal, George D., quotes from the last report of the Ohio Dairy and Food Department, 8 samples of Hoffman's anodyne examined, 2 passed, 6 failed.—Proc. Ohio Pharm. Ass. 1910, p. 73.

Bartlett, C. S., discusses the manufacture and assay of spirit of nitrous ether, and points out the ease with which this preparation may be controlled.—Drug. Circ. 1910, v. 54, p. 349.

Eberle and Duncan discuss the manufacture of spirit of nitrous ether and its assay.—Proc. Texas Pharm. Ass. 1910, pp. 100–102.

Brown, L. A., calls attention to the carelessness exhibited in storing sweet spirit of niter, and suggests the avoidance of glass-stoppered shop-ware.—Proc. Kentucky Pharm. Ass. 1910, p. 93. See also Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 160.

Eberle, Eugene G., reports that the addition of glycerin to the spirit of nitrous ether has been found to serve as a preservative.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1134.

Evans, J., thinks that pharmacists should take proper precautions to enable them to guarantee the spirit of nitrous ether which they dispense. This preparation should be tested periodically, and when it is found to have deteriorated below the minimum official strength it should promptly be replaced by another sample.—Brit. & Col. Drug. 1910, v. 57, p. 132.

Davis, James E., reports that spirit of nitre presents the difficulty of losing strength through evaporation or decomposition. This, however, is not a valid defense for selling goods below standard.—Proc. Michigan Pharm. Ass. 1910, p. 62.

Jensen, Harold R., discusses the complex constitution of sweet spirit of nitre as indicated by an estimation of its alcoholic strength.—Pharm. J. 1910, v. 30 (84), p. 606.

Watson, John, contributes a note on the estimation of sweet nitre, with a figure of a simple apparatus which he has devised for the purpose, and urges the periodical estimation of this product.—*Ibid.* p. 389.

Eberle, E. G., states his experience would lead him to believe that only a few druggists make spirit of nitrous ether. He believes, therefore, that ethyl nitrite ought to be official.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 781.

Sayre, L. E., reports on 2 samples of concentrated nitrous ether: both illegal.—*Ibid.* p. 1097.

Cocke and Duncan discuss the keeping qualities of spirit of nitrous ether and report that several samples examined by them varied in strength from 2.26 to 3.45 per cent. They outline a modification of the U. S. P. method for making ethyl nitrite.—*Ibid.* pp. 1263–1264.

Ziefle, Adolph, reports that very few of the samples of nitrous ether examined, tested above 60 per cent U. S. P. strength.—Proc. North Dakota Pharm. Ass. 1910, p. 61.

Table showing some of the analytical results reported in connection with spirit of nitrous ether.

Reporters.	Number of samples— Examined.	Number of samples— Rejected.	References.
Sayre, L. E	55	49	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1097.
Sawtelle, J. B	15	15	*Ibid.* p. 746.
Hill, Edward C	1	1	Bull. Colorado Bd. Health, 1910, v. 10, No. 2, p. 8.
Lythgoe, Hermann C	15	10	Rep. Massachusetts Bd. Health, 1910, pp. 367-368.
Bachman, G	3	3	Proc. Minnesota Pharm. Ass. 1910, p. 64.
Arny, H. V	15	12	Proc. Ohio Pharm. Ass. 1910, p. 70.
Local Government Board	181	54	Pharm. J. 1910, v. 30 (84), p. 33.

An editorial (Lancet 1910, v. 178, p. 872) comments on the difficulties which arise from the use of spirit of nitrous ether in mixtures, with some notes of its incompatibilities, among which are noted iodides, bromides, antipyrine, sodium salicylate and drugs or preparations containing tannin.

Robinson, William J., states that the two incompatibles of practical import that the physician has to bear in mind are: Antipyrine (a green color due to the formation of a nitroso compound) and iodides (the liberation of iodine). With the salicylates a brownish color is formed, which does not amount to much, and with the fluid extracts of uva ursi and buchu there is a slight effervescence.—Critic and Guide, 1910, v. 13, pp. 135–136.

Barton, Wilfred M., asserts that sweet spirit of niter does not affect the kidneys nor the sweat glands; consequently it is neither diuretic nor diaphoretic.—J. Am. M. Ass. 1910, v. 55, p. 26.

The Journal-Record of Medicine (Atlanta), protesting against Barton's pronunciamento, asks have we not all seen the diuretic effect of sweet spirits of niter? Are there sufficient millions of animals to prove it has no such action in human beings who are being treated with it?—*Ibid.* p. 1038.

SPIRITUS AMMONIÆ.

Rippetoe, John R., thinks that the specific gravity of spirit of ammonia should be taken at 15.0°, as it is almost impossible to take the specific gravity at 25° by means of a pycnometer at least, owing to the liberation of ammonia gas at the higher temperature.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1064.

Osborne, Oliver T., thinks there is no reason for including in the Pharmacopœia spirit of ammonia.—J. Am. Ass. 1910, v. 54, p. 291.

SPIRITUS AMMONIÆ AROMATICUS.

LaWall, Charles H., thinks that a minimum degree of alkalinity preferably calculated as gaseous ammonia, would be an advantage for aromatic spirit of ammonia, which is very prone to deteriorate.—Am. J. Pharm. 1910, v. 82, p. 25.

The Local Government Board (38th Ann. Rep. Part II) reports 1, out of 13 samples of aromatic spirit of ammonia examined in 1908, not standard.—Pharm. J. 1910, v. 30 (84), p. 33.

SPIRIT OF CARDAMOM COMPOUND N. F.

Beringer, George M., presents a formula for compound spirit of cardamom.—Proc. New Jersey Pharm. Ass. 1910, p. 68.

SPIRITUS FRUMENTI.

An editorial (Bull. Pharm. 1910, v. 24, p. 489) comments on the numerous answers to the question "What is whisky", gives it up, and bids readers cheer up as another decision will be coming along some time within a few weeks.

Buchanan, G. S., reports that the Royal Commission concluded that the term "whisky" may properly be applied to describe any potable spirit obtained by distillation from a mash of cereal grains saccharified by the diastase of malt.—Rep. Local Govt. Bd. Suppl. Lond., 1910, p. 215.

A news note (Am. Druggist, 1910, v. 56, p. 19) calls attention to the definition of whisky as promulgated by President Taft. See also *ibid.* p. 114, Meyer Bros. Drug. 1910, v. 31, p. 66, Drug Topics, 1910, v. 25, p. 1, and Pharm. J. 1910, v. 30 (84), p. 672.

Muttelet, F., criticises the definition of whisky as promulgated by President Taft.—Bull. Internat. Repress. des Fraud. 1910, v. 3, pp. 66-69.

Beal, J. H., comments on the President's whisky decision, and concludes that this decision seems to be based upon well-established historical data and is marked by the same critical analysis of evidence and logical reasoning that characterized his opinions from the bench.—Midl. Drug. 1910, v. 44, pp. 4–5.

F. I. D. 113, 118, and 127 refer to the labeling of whisky, mixtures and imitations thereof.

Notices of Judgment No. 349, 350, 353, and 361 relate to misbranding of whisky.

The regulations issued by the U. S. Commissioner of Internal Revenue, regarding the making and branding of distilled spirits, are reprinted.—Drug Topics, 1910, v. 25, p. 211.

Rusby, H. H., asserts that while the recent decision regarding the labeling of whisky has no bearing on the article when sold as a drug or medicine, yet advantage is taken of it by concerns engaged in purveying whisky for the sick, and a large part of that which is sold by pharmacists is factitious.—Drug. Circ. 1910, v. 54, p. 7.

Allen, Martha M., (W. C. T. U.), requests the omission of whisky from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 891.

The members of the New York Branch of the A. Ph. A. recommend that whisky and other alcoholic liquors be continued in the list of pharmacopœial articles.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 288. See also Drug. Circ. 1910, v. 54, p. 254.

Remington, Joseph P., states that spiritus frumenti required more than 5 years discussion to settle the necessary tests and requirements.—Midl. Drug. 1910, v. 44. Also Am. Druggist, 1910, v. 56, p. 134.

Rusby, H. H., thinks it would be folly to fix a standard for whisky in view of the recent Federal definition of the word.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 286.

Adams, A. B., reports some observations on the chemical changes taking place in the distillation of whisky. He describes and illustrates some of the stills used and illustrates the composition of the distillates by tables.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 34–43.

Holmes, W. C., presents a study of the methods of analysis, and some suggested improvements, for distilled liquors: whisky, brandy and gin; with analyses of distilled liquors entering the port of Manila.—Philippine J. Sc. 1910, v. 5, A, pp. 23–28.

Vivencio del Rosario, Mariano, presents a note on the determination of aldehydes in distilled liquors, Ripper's method.—*Ibid.* pp. 29–32.

LaWall, Charles H., states that the "Marsh" test for caramel in whisky should supersede the Fullers earth test, which is unreliable.—Am. J. Pharm. 1910, v. 82, p. 26.

Bassett, H. P., outlines a method to determine fusel oil in distilled liquors.—J. Ind. & Eng. Chem. 1910, v. 2, p. 389.

Lythgoe, Hermann C., reports the examination of 11 samples of whisky, 6 of which were below the U. S. P. requirement in alcohol; the lowest of these contained 36 per cent of alcohol by volume. All the samples were examined for wood alcohol, with negative results.—Rep. Massachusetts Bd. Health, 1910, p. 369.

SPIRITUS GLYCERYLIS NITRATIS.

Dohme and Engelhardt outline the Ph. Hung. III method for the quantitative determination of spirit of nitroglycerin.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1187–1188.

Berl and Delpy report experimental observations on the alkaline saponification of glyceryl trinitrate.—Ber. deutsch. chem. Gesellsch. 1910, v. 43, pp. 1421–1429.

Bernegau, L. H., reports that of three samples of 10 per cent nitroglycerin solution examined, all were below the declared strength, testing respectively 8.9, 9.32 and 9.81 per cent.—Proc. Pennsylvania Pharm. Ass. 1910, p. 140.

Laws, C. E., presents a note on nitroglycerin head, a term well-known to all who are engaged in the manufacture of high explosives.—J. Am. M. Ass. 1910, v. 54, p. 793.

Brady, William, states that nitroglycerin acts in 3 minutes by mouth and its action continues about 45 minutes; it is never necessary to give it hypodermically if the mouth can be opened.—N. York M. J. 1910, v. 91, p. 210.

Barton, Wilfred M., thinks it a sign of progress that the ridiculous custom of using a solution of nitroglycerin as a heart stimulant in anæsthetic accidents and shock is becoming more and more rare.—J. Am. M. Ass. 1910, v. 55, p. 286.

Miller, Joseph L., details the results of his observations on the use of nitroglycerin for the reduction of hypertension.—*Ibid.* v. 54, p. 1666.

An unsigned abstract (Envoy) states that glonoin is called for in that peculiar condition when the patient seems lost or unfamiliar in places well known.—J. Am. Inst. Homœop. 1910, v. 2, p. 317.

An editorial (Hahnemann. Month. 1910, v. 45, p. 45) points out that great harm may result from the indiscriminate use of nitrites to reduce blood pressure in cases of arterial sclerosis and interstitial nephritis.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 254–255) reviews an article by Michaelis (Therapie der Gegenwart, 1909, No. 12, p. 656) on the action of nitroglycerin in the treatment of angina pectoris.

For additional references on the pharmacology and uses of spirit of glyceryl trinitrate see Chem. Abstr., Zentrlbl. Biochem. u. Biophysik., J. Am. M. Ass., and Index Medicus.

SPIRITUS JUNIPERI COMPOSITUS.

An editorial note (Drug. Circ. 1910, v. 54, p. 156) asserts that if spiritus juniperus compositus is gin, as is asserted by a drug journal, then the question "What is whisky?" that has confronted the present Federal administration is a more complicated one than the average person has supposed; or a more simple one, we do not know just which.

SPIRITUS MYRCIÆ N. F.

Davis, James E., reports that bay rum is an article in which there is danger, as it is not unusual on the part of certain dishonest people to put out a bay rum, of which the basis is methyl alcohol. This is dangerous, as every pharmacist knows, and although bay rum is not taken internally it is used externally in enormous quantities.—Proc. Michigan Pharm. Ass. 1910, p. 64.

Potter, Hubert F., reports the examination of 5 samples of bay rum, 4 containing methyl alcohol and the fifth was an otherwise inferior product.—Rep. Connecticut Dairy and Food Com. 1910, Hartford 1911, p. 135.

Sayre, L. E., reports on 11 samples of bay rum: 9 passed; 2 illegal.—Proc. Am. Pharm. Ass. 1910, p. 58, p. 1095.

Beal, George D., quotes from the last report of the Ohio Dairy and Food Department, 37 samples of bay rum examined, 11 passed, 26 failed.—Proc. Ohio Pharm. Ass. 1910, p. 73.

Schimmel & Co. (Semi-Annual Report, October 1910, p. 21) report that oil of bay continues to be exceedingly neglected, and that in the West India Islands little interest is now shown in its production.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 18) report that 5 samples of bay oil were assayed, all proved to be of satisfactory quality: specific gravity from 0.985 to 0.995; 56.13 to 70.69 per cent phenols; refractive index of one 1.5201°.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 12) report that the quality of bay oil is not as high as formerly. Five adulterated samples had a specific gravity of from 0.8945 to 0.9719; optical rotation of −1.20° to −5.30°, contained from 38.5 to 68 per cent phenols, with refractive index of 1.4910° to 1.5102°. Some of these were complicated mixtures, with such substances as spike lavender, eugenol, etc.

Gilmour, D. (Brit. Dent. J.) thinks oil of bay a perfectly nonirritant and antiseptic agent for root canals, it may prove valuable in some cases though it is not well known in dentistry.—Pharm. J. 1910, v. 30 (84), p. 644.

SPIRITUS VINI GALLICI.

Haas, Bruno, reviews some of the various definitions applied to wine distillate, wine spirit and brandy.—Pharm. Post, 1910, v. 43, pp. 817–818.

An editorial (*Ibid.* pp. 237–240) discusses recent contributions on the classification of brandy and French brandy.

Buchanan, G. S., reports that the Royal Commission concluded that the term "brandy" is applicable to a potable spirit manufactured from fermented grape juice and from no other materials.—Rep. Local Govt. Bd. Suppl. Lond. 1910, p. 215.

The Budapest Correspondent (Lancet 1910, v. 178, p. 961) notes that Cognac has been omitted from the Ph. Hung. III because it can be obtained in every grocer's shop.

The Chemist and Druggist (1910, v. 77, p. 899) notes that a peculiar feature of the Ph. Germ. V monograph on spiritus vini gallici is that only a brief description is given with the remark that the preparation must meet the requirements set forth in the special laws affecting this substance.

Trübsach, Paul, reviews the German laws regulating the sale of Cognac and concludes that factitious Cognac and so-called cognac essence are not inhibited.—Ztschr. öffentl. Chem. 1910, v. 16, pp. 2–4. See also Cons. & Tr. Rep. April 2, 1910, p. 230.

Micko, Karl, reports some analytical data on the composition of Cognac, ordinary brandy, rum and arrak.—Ztshr. Unters. Nahr. u. Genussm. 1910, v. 19, pp. 305–322.

Holmes, W. C., reports the examination of 12 samples of brandy entering the port of Manila. All samples were colored with caramel and all but one contained sugars.—Philippine J. Sc. 1910, v. 5, A, p. 27.

Allen, Martha M., (W. C. T. U.), requests the omission of brandy from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 891.

STAPHISAGRIA.

LaWall and Bradshaw report finding from 4.5 to 5.45 per cent ash in larkspur seed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Hommell, Philemon E., thinks that tincture of staphisagria should appear in the next U. S. P.—Merck's Rep. 1910, v. 19, p. 122.

Fisher, C. E., states that staphisagria is recommended for the sharp cutting pains of incised wounds.—J. Am. Inst. Homœop. 1910, v. 2, p. 16.

Leming, W., states that staphisagria in large doses affects the system as an emeto-cathartic, depressing the spinal cord and producing asphyxia. It somewhat resembles aconite, lessening sensation and motion. Three to five grains act as a vermifuge, but there are safer remedies. It is poisonous to all animal life. A 50 per cent solution of the tincture has long been known to kill pediculosis capitis and pubis. Too strong solutions will produce dermatitis. It should be reapplied for three or four nights until all the eggs have matured. Staphisagria properly used in the small dose is a valuable remedy.—Eclectic M. J. 1910, v. 70, pp. 481–483.

STILLINGIA.

Hallberg, C. S. N., in connection with compound syrup of stillingia N. F., asserts that the compound fluid extract of stillingia should be mixed with syrup. The active principle of stillingia is a fixed oil insoluble in water. This and the resinous constituents are precipitated by the present method and the syrup is inert. The syrup should be cloudy and should be "Shaken when Taken."—Bull. Am. Pharm. Ass. 1910, v. 5, p. 29.

Nifer, Frank J., asserts that his usual remedy for eczema is the compound syrup of stillingia, especially so when the patients are children.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 198.

STRAMONIUM.

Henriksson, J., discusses the history, characteristics and the cultivation of *Datura stramonium* L.—Svensk farm. Tidskr. 1910, v. 14, pp. 177–182.

Chevalier, J., experimenting on the influence of cultivation on the alkaloidal content of some of the Solanaceæ, has obtained a lot of *D. stramonium* leaves which yielded 0.200 per cent total alkaloids, instead of 0.100 to 0.125.—Compt. rend. Acad. sc. 1910, v. 150, pp. 344–346. See also Chem. & Drug. 1910, v. 76, p. 397.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5, [1910], 1911, p. 36) point out that the Ph. Germ. V. permits an ash content of 20 per cent in stramonium leaves.

LaWall and Bradshaw report finding from 18.9 to 19.0 per cent ash in stramonium leaves.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Engelhardt, Hermann, thinks that there was no necessity for the Pharmacopœia committee to reduce the standard for stramonium. Only 2 out of 20 samples assayed below the official standard, while fully 70 per cent assayed much higher, e. g., 0.40 to 0.45 per cent total alkaloids.—*Ibid.* p. 1258.

Clark, Albert H., reports that not one sample of stramonium has been found up to the original standard of 0.35 per cent alkaloids. All have met the later requirements of 0.25 per cent, however.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 124. Also Proc. Am. Pharm. Ass. 1910, v. 58, p. 747.

Scoville, W. L., thinks that the U. S. P. method of assay for stramonium is satisfactory when Mayer's reagent is carefully used to insure complete extraction.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 820.

Caesar & Loretz (Jahres-Ber. 1910, p. 98) recommend the Keller method of assay for the determination of the alkaloidal content of stramonium, and point out that only the U. S. P. requires the determination of the alkaloidal content and that this Pharmacopœia has reduced the former requirement of 0.35 of alkaloid to 0.25 per cent.

Rusby, H. H., states that he has met with stramonium leaves, heavily adulterated with chestnut leaves, henbane, stems and other matter.—Practical Druggist, 1910, v. 27, p. 424. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 747.

Wiley, H. W., reports that thirteen shipments of stramonium were entered, all of which were of good quality.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 470.

Sayre, L. E., reports on 7 samples of stramonium: 1 passed; 6 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.

Beal, George D., reports that the adulteration of stramonium leaves with chopped chestnut leaves is quite common.—Proc. Ohio Pharm. Ass. 1910, p. 72.

Patch, E. L., reports assays of 6 samples of stramonium varying from 0.29 to 0.41 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 747.

Vanderkleed, Chas. E., reports 24 assays of stramonium leaf, lowest 0.274, highest 0.501 per cent mydriatic alkaloids; all above standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Hommell, Philemon E., thinks that tincture of stramonium is so seldom prescribed that it should be dropped.—Merck's Rep. 1910, v. 19, p. 122.

Havenhill, L. D., outlines a modified formula for making tincture of stramonium.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 791.

Eakle, H. W., reports on 3 samples of tincture of stramonium which assayed 0.0176, 0.02048 and 0.0324 per cent mydriatic alkaloids.—Am. J. Pharm. 1910, v. 82, p. 242.

Koch, William J., asserts that in stramonium ointment, an ointment base consisting of 1 part hydrous wool-fat, and 3 parts of petrolatum will make a nice, smooth, absorbent ointment.—Am. Druggist, 1910, v. 56, p. 239.

Mittelbach, Wm., thinks that the omission of benzoinated lard from the formula for stramonium ointment would be an improvement.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 793.

Members of the Denver Branch of the A. Ph. A. think that the tedious work of rubbing the extract in a mortar with the dilute alcohol until a smooth mixture results can be avoided by placing the extract with the dilute alcohol in a covered vessel on a water bath for a few minutes, or until dissolved, and then proceeding as usual.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 166.

Osborne, Oliver T., thinks that stramonium ointment is so similar in its action to belladonna ointment that it might well be omitted.—J. Am. M. Ass. 1910, v. 54, p. 51.

Mott, J. V., states that stramonium is the most powerful stimulant and at the same time antispasmodic; it will relieve pain, no matter where located, if of a spasmodic nature; it will relieve the pain of cystitis, administered with the hypodermic needle; it is the one sure remedy for dysmenorrhœa, administered subcutaneously; it will promptly relieve asthma when used as above.—Eclectic M. J. 1910, v. 70, pp. 128–129.

Royal, George, (Envoy) finds stramonium a remedy for suppression of urine in the course of eruptive diseases.—J. Am. Inst. Homœop. 1910, v. 2, p. 251.

An unsigned abstract (Homœo. World) reports the case of a girl of nine and a half years, cured in 28 days of stuttering, after taking stramonium 3x t. d. s.—*Ibid.* p. 317.

Shoemaker, John V., reports a case of stramonium poisoning.—Critic and Guide, 1910, v. 13, p. 132.

STRONTII BROMIDUM.

Dunning, H. A. B., points out that the U. S. P. directs "chromate" as indicator in the determination of strontium bromide, while ferric ammonium sulphate is used for the iodide.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 969.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 30) report that commercial samples of strontium salts are frequently far from pure.

STRONTII SALICYLAS.

Seidell, Atherton, reports experimental determinations on the solubility of strontium salicylate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 5.31 gm., and 100 gm. of U. S. P. alcohol will dissolve 2.06 gm. of strontium salicylate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 73–76; 91.

STROPHANTHINUM.

Hatcher, Robert A., presents a note on strophanthin with a table giving the several amounts of the various substances which equal one cat unit.—J. Am. Ass. 1910, v. 54, p. 1051.

Hatcher and Brody, in discussing the biological standardization of drugs, recommend determining the minimal lethal dose of strophanthin on the cat.—Am. J. Pharm. 1910, v. 82, pp. 360–372.

Greene, Chas. W., presents a note on the action of *g*-strophanthin on the isolated mammalian heart.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, p. 398.

See also Werschinin, N.—Arch. exper. Path. u. Pharmakol., 1910, v. 63, pp. 386–404.

Kasztan, Max, presents a contribution to our knowledge of the circulatory action of strophanthin.—Arch. exper. Path. u. Pharmakol., 1910, v. 63, pp. 405–423.

Rodolico, L., contributes a note on the comparative action of strophanthin and of digitoxin on the heart of the toad [frog].—Arch. farmacol. sper. v. 10, pp. 233–240.

Straub, H., reports the results of experiments on the medicinal use of strophanthin in artificially reduced blood-pressure.—Therap. Monatsh. 1910, v. 24, pp. 121–124.

Henderson, V. E., feels that Fraenkel's method of intravenous administration of strophanthin puts into the hands of the physician a very valuable means of overcoming cardiac weakness promptly, and, in consequence, must prove a very great boon.—Am. J. M. Sc. 1910, v. 140, p. 317.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 351–352) calls attention to several communications on the practical use of strophanthin in therapeutics.

For additional references on the pharmacology and uses of strophanthin see Zentrlbl. Biochem. u. Biophysik., J. Am. M. Ass., and Index Medicus.

STROPHANTHUS.

Braun, K., discusses the varieties of strophanthus occurring in German East Africa and calls attention to the characteristic features and the occurrence of the several plants. Of the 5 varieties described only one—*Strophanthus kombé* is being used in medicine.—Der Pflanzer, 1910, v. 6, pp. 291–301.

Badermann, G., in a report on the cultivation of official plants in Tongo, states that *S. hispidus* is being successfully cultivated and that the plants bear fruit after the third year.—Arch. d. Pharm. 1910, v. 248, pp. 258.

Caesar & Loretz (Jahres-Ber. 1910, p. 55) point out that much of the strophanthus sold as *S. kombé* will not comply with the sulphuric acid test. They also point out that Focke (Ztschr. ärzt. Fortbildung, 1909, Nr. 1) presents a contribution on strophanthus, its preparation and uses.

Hopkins, J. L., reports that during the year practically all importations of the hispidus variety of strophanthus have been excluded on the ground that it is not recognized in the U. S. P.—Proc. N. W. D. A. 1910, p. 200.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 55) point out that the Ph. Germ. V requires that strophanthus be derived from *S. kombé* Oliver and regret that a strophanthin assay was not included.

LaWall and Bradshaw report finding 6.6 per cent ash in strophanthus seed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Dohme and Engelhardt state that the Ph. Hung. III directs that strophanthus seed when extracted with alcohol should yield 12 per cent of extractive matter. Only the kombé seeds are official.—*Ibid.* p. 1192.

Engelhardt and Jones discuss the standardization of strophanthus and suggest that the U. S. P. adopt a standard and assay method for strophanthus.—*Ibid.* pp. 1044–1047.

Focke, C., outlines his method for the physiological standardization of digitalis and strophanthus. He also reviews some of the recently published communications on the subject and proposes an international standard for digitalis.—Arch. Pharm. 1910, v. 248, pp. 345–376.

Caesar & Loretz (Jahres-Ber. 1910, pp. 117–119) outline the Fromme method for estimating the strophanthin content of strophanthus.

Rydén, Th., discusses the valuation of strophanthus and of tincture of strophanthus. He concludes with the suggestion that an identification test be established for strophanthus and that the drug be required to contain at least 7 per cent of strophanthin.—Svensk farm. Tidskr. 1910, v. 14, pp. 73–77, 93–96.

Hatcher and Brody outline a method for standardizing strophanthus by the use of the cat.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 929–939. Also Am. J. Pharm. 1910, v. 82, pp. 360–372.

Wood, H. C., Jr., recommends the guinea pig method for standardizing strophanthus.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 941–942.

Githens and Vanderkleed present a standard for fluid extract and tincture of strophanthus.—*Ibid.* p. 918.

Dohme and Engelhardt state that the Ph. Hung. III directs that tincture of strophanthus contain 2 per cent of extractive matter.—*Ibid.* pp. 1193–1194.

Raubenheimer, Otto, points out that the tincture of strophanthus, which although of 10 per cent strength in most pharmacopœias, is 2.5 per cent in Great Britain, and was 5 per cent in the United States and 20 per cent in France and Mexico.—*Ibid.* pp. 1136–1137.

Beringer, George M., thinks that in making tincture of strophanthus the drug should be first exhausted with purified benzin.—*Ibid.* p. 1249.

Thome, E. R., thinks that directions should be given to cool tincture of strophanthus after finishing percolation, to separate fat and then filter at once.—Practical Druggist, 1910, v. 28, p. 123.

Havenhill, L. D., outlines a formula for the tincture of strophanthus.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 791.

Hommell, Philemon E., thinks that tincture of strophanthus is not entirely satisfactory. It precipitates and an improvement is therefore in order.—Merck's Rep. 1910, v. 19, p. 122.

Beringer, George M., thinks that the present formula for the tincture of strophanthus is certainly a mistake. The result of reducing the alcoholic strength has not been satisfactory.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 800.

Caesar & Loretz (Jahres-Ber. 1910, p. 121) describe a method for the assay of tincture of stropanthus.

Hatcher and Bailey discuss the clinical use of strophanthus.—J. Am. M. Ass. 1910, v. 55, pp. 1697–1700. Also Tr. Am. M. Ass., Sec. Pharm. and Therap. 1910, pp. 71–80.

Turnbull, H. Hume, asserts that strophanthus is only about half as active on man as digitalis, Ph. Brit. tinctures being used in both cases.—Lancet, 1910, v. 179, p. 1615.

STRYCHNINA.

Reidel's Berichte (1910, p. liii) presents a monograph giving the composition, properties and tests for strychnine.

Menge, George A., in a study of melting point determinations, reports that strychnine decomposes at the melting point and therefore requires further investigation.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 92.

Dott, D. B., contributes a note on the solubility of strychnine salts, calling attention to the varying statements made by the different pharmacopœias.—Pharm. J. 1910, v. 31 (85), p. 795.

Schaefer, George L., gives the solubility of strychnine in alcohol at 25° as 1:150; in chloroform at 25° as 1:7.—Am. J. Pharm. 1910, v. 82, p. 220.

Perkins, Jr., and Robinson, in a contribution to the chemistry of strychnine, berberine and allied alkaloids, discuss the composition of strychnine and brucine.—J. Chem. Soc., Lond., 1910, v. 97, pp. 305–323.

Leuchs and Reich, in an additional contribution on the strychnine alkaloids, discuss the reactions of strychninonic acid and of strychninolone.—Ber. deutsch, chem. Gesellsch. 1910, v. 43, pp. 2417–2429.

Mossler, Gustav, reports observations on the action of bromine cyanide on brucine and strychnine.—Monatsh. Chem., Wien, 1910, v. 31, pp. 1–22.

Fuller, H. C., discusses the determination of cocaine and strychnine, and atropine and strychnine when they occur together.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 378–379.

Rosenthaler and Görner, in a report on the use of aromatic nitroderivatives as precipitants for alkaloids, point out that dinitrocresol produces characteristic crystals with strychnine; trinitrothymol and tetranitrophenolphthalein were found to be more sensitive than picric acid.—Ztschr. anal. Chem. 1910, v. 49, p. 351.

Stockman, Ralph, in an address on modern changes in materia medica, states that the first scientific investigation of a drug was made in France by the physiologist Magendie in 1809. He investigated the *Upas tieuté*, which contains strychnine, and by a series of experiments similar to those used at the present time, he established the beginnings of exact experiment in pharmacology.—Pharm. J. 1910, v. 31 (85), p. 526.

Osborne, Oliver T., asserts that as the alkaloid strychnine is never used as such, it and similar pure alkaloids could well be omitted from the Pharmacopœia, the salts being sufficient.—J. Am. M. Ass. 1910, v. 54, p. 468.

Waugh, W. F., contributes a note on strychnine in pneumonia of the aged.—Med. Rec. 1910, v. 77, p. 921.

Walker, H. F. Bell, comments on the diversity of opinion as to the value of strychnine in shock, and suggests that a commission be appointed to attempt to settle the question.—Brit. M. J. 1910, v. 1, p. 1204.

Laqueur, E., discusses the selective action of strychnine.—Pharm. Post, 1910, v. 43, p. 799.

Ryan and McGuigan present a communication on the site of action of strychnine in the spinal cord.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, pp. 319–356.

Koch and Mostrom conclude that the central nervous system, especially the cord, by its high phosphatid content, is enabled to pick the strychnine out of the blood stream on account of the affinity of the lecithin and kephalin for the strychnine as compared to serum albumin.—*Ibid.* pp. 265–269.

de Barenne, J. G. Dusser, in a contribution to the genesis of strychnine tetanus, reports observations on the syndrome of strychnine poisoning of the elements of the dorsal cord.—Zentrlbl. Physiol. 1910–11, v. 24, pp. 840–842, 1100–1102, and Arch. farmacol. sper. 1910, v. 10, pp. 169–173; 241–243.

Bagloni, S., contributes a note on the elective action of strychnine.—Arch. farmacol. sper. 1910, v. 10, pp. 204–206.

Githens and Meltzer present a preliminary communication on the control of strychnine poisoning by means of intratracheal insufflation and ether.—J. Pharmacol. & Exper. Therap. 1910–11, v. 2, pp. 357–359.

Shaklee, A. O., finds that chloroform is far inferior to ether for the treatment of strychnia poisoning.—Philippine J. Sc. 1910, v. 5, B, pp. 547–551.

Shoemaker, John V., reports a case of strychnine poisoning in a student of pharmacy who by mistake took sixteen 1/30 grain pills of strychnine sulphate within 3 hours; recovered.—J. Am. M. Ass. 1910, v. 54, p. 1612.

Juckenack and Griebel report observations on the influence of strychnine containing foods on insects.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 19, pp. 571–573.

Simon, J., reports observations on the rapidity of absorption of strychnine in the presence of colloids.—Biochem. Ztschr. 1909, v. 22, pp. 394–402.

Hatcher, Robert A., asserts that the absorption of strychnine from the alimentary canal of the cat into the general circulation is very variable. It may be absorbed at times from the full stomach quite as readily as from the subcutaneous tissues.—J. Am. M. Ass. 1910, v. 55, p. 749.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 352–353) reviews several communications on the therapeutic application of strychnine in various gastric and intestinal affections.

For additional references on the chemistry, pharmacology and uses of strychnine see Chem. Abstr., Zentrlbl. Biochem. u. Biophysik., J. Am. M. Ass., and Index Medicus.

STRYCHNINÆ NITRAS.

Dohme and Engelhardt state that in the Ph. Hung. III only strychnine nitrate is official.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1192.

Schaefer, George L., gives the solubility of strychnine nitrate in water at 25° as 1:55; in alcohol as 1:220.—Am. J. Pharm. 1910, v. 82, p. 220.

STRYCHNINÆ SULPHAS.

Schaefer, George L., asserts that strychnine sulphate does not melt at 200°. If heated to about 250° it begins to get brown, and at a higher temperature it melts with decomposition. It thus follows that no distinct melting point can be given for this salt. He gives the solubility in water at 25° as 1:45; in water at 80° as 1:9; in alcohol at 25° as 1:105.—Am. J. Pharm. 1910, v. 82, p. 220.

STYRAX.

Parry, Ernest J., describes storax and discusses its composition and characteristics. He presents a table reporting the analysis of a number of typical samples of undoubted authenticity and a second table showing the results found by K. Dieterich.—Am. Perf. 1910–11, v. 5, pp. 160–161.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 16) report that they have again to note the very great variation occurring in crude storax and also the poor quality of the greater part of the samples examined. The figures obtained were: soluble in 90 per cent alcohol 61.6 to 79.0 per cent, average 70.6 per cent; insoluble in 90 per cent alcohol 1.45 to 4.20 per cent, average 2.38 per cent; free balsamic acid, as benzoic, 1.00 to 1.75, average 1.40 per cent; combined balsamic acid, as benzoic, 3.91 to 13.07 per cent, average 7.37 per cent.

SULPHONETHYLMETHANUM.

Menge, George A., in a study of melting point determinations, reports on 5 samples of sulphonethylmethane which were found to melt at from 76.4° to 77.1°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 94. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1043.

Eldred, Frank R., reports that five lots of sulphonethylmethane had melting points between 75° and 76°, one lot melted at 71°. Six lots of Bayer and Co.'s trional had melting points between 75° and 77°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 897.

Gietner, Charles, asserts that sulphonethylmethane and sulphonmethane are equivalent to some of the much used proprietaries of practically identical composition and general properties. Sulphonal and trional have of late years given way to these late additions.—Proc. Missouri Pharm. Ass. 1910, p. 105.

Wood, H. C., Jr., calling attention to the ignorance on the parts of physicians, as to the chemical constitution of some of the newer synthetics, cites a case of sulphonal poisoning in which the patient was suffering from insomnia and the physician in charge gave trional, with fatal results.—J. Am. M. Ass. 1910, v. 54, p. 438.

Mackintosh, J. S., reports 2 cases of poisoning by massive doses of trional, with recovery.—Lancet, 1910, v. 178, p. 104.

The Scottish Registrar-General's report for 1908 shows one death from trional.—Pharm. J. 1910, v. 31 (85), p. 315.

SULPHONMETHANUM.

Menge, George A., in a study of melting point determinations reports on 6 samples of sulphonmethane which were found to melt at from 126.3° to 126.8°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 95. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1043.

Eldred, Frank R., reports that six lots of sulphonethane melted between 125° and 125.5°. Eleven lots of Bayer & Co.'s sulphonal had melting points between 125° and 126°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 897.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 73) report that a sample of English manufactured sulphonal tested had a high degree of purity; the melting point was 125°.

Osborne, Oliver T., thinks that sulphonal could well be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 468.

Thomas McKay, Middlesbrough, died from an overdose (250 grains) of sulphonal.—Pharm. J. 1910, v. 30 (84), p. 371.

Additional cases of sulphonal poisoning are reported.—*Ibid.* pp. 767, 714; v. 31 (85), pp. 20, 105.

SULPHUR.

Breves, Rudolph, thinks there is no need of spelling sulphur with a ph, sulfur would answer.—Practical Druggist, 1910, v. 28, p. 38.

Bruhn, G. A., reviews the sulphur industry of Sicily before the development of the Louisiana competition.—Chem. Ind. 1910, v. 33, pp. 64–66.

An abstract (Rassegna Mineraria) reviews the sulphur industry of Sicily.—Oil, Paint and Drug Reporter, 1910, v. 77, May 16, p. 28D.

Wilber, David F., reports that the sulphur shipped from Kobe is the product of volcanic springs on the island of Kyushu, and when simply congealed, in which condition it is sacked and shipped, the result is 99.8 per cent pure sulphur.—Cons. & Tr. Rep. Aug. 15, 1910, p. 503.

Collin, E., discusses the analysis of sulphur and presents a number of illustrations showing the appearance of sulphur under the microscope.—Ann. Falsif. 1910, v. 3, pp. 132–138.

The Local Government Board (38th Ann. Rep. Part II) reports 4, out of 142, samples of sulphur examined in 1908, not standard.—Pharm. J. 1910, v. 30 (84), p. 33.

McClintic, Thomas B., in a study on disinfectants, outlines methods for using sulphur as an insecticide.—Public Health Bulletin No. 42, 1910, Washington 1911, pp. 24–26.

Wild, R. B., discusses the action of sulphur and certain of its compounds as intestinal antiseptics.—Lancet, 1910, v. 179, p. 1615.

Percy, H. W., reports a number of cases of sulphur poisoning, in horses, which he believes to be more common than is generally supposed. He considers sulphur very poisonous if given in larger quantities than 250 gm.—Vet. J. Lond. 1910, v. 17, pp. 29–31.

Wolf and Österberg discuss the quantitative determination of sulphur and phosphorus in biological products.—Biochem. Ztschr. 1910, v. 29, pp. 429–438.

Konschegg, Artur, reports a study on the behavior of elementary sulphur in the animal organism.—Arch. exper. Path. u. Pharmakol. 1910, v. 62, pp. 502–517.

Wild discusses the pharmacology of sulphur and its compounds. Abstract, Chem. & Drug. 1910, v. 77, p. 761.

Monroe, A. Leight, quotes Walter Joel Brown who recommends sulphur in the treatment of acne of adolescence with black pores in the face; chronic cases.—Hahnemann. Month. 1910, v. 45, p. 717.

Yeager, Wm. H., states that sulphur is a remedy that is prescribed most often upon a constitutional basis. The physician must be governed to a large degree by the peculiar make up of the individual when selecting sulphur as a curative remedy.—*Ibid.* p. 376.

Harbert, J. P., asserts that sulphur is one of the best alteratives in use in eye practice. It is especially valuable in all scrofulous eye affections. In scrofulous ulceration of the cornea it should not be neglected. It is a decided stimulant and improves the condition of the part so as to promote the healing process.—Eclectic M. J. 1910, v. 70, p. 131.

SULPHUR LOTUM.

Koch, William J., asserts that in sulphur ointment, an ointment base consisting of 1 part hydrous wool-fat, and 3 parts petrolatum will make a nice, smooth, absorbent ointment.—Am. Druggist, 1910, v. 56, p. 239.

Mittelbach, Wm., reports that the ointment of sulphur is all right, providing it is made up fresh when dispensed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 792.

SULPHUR PRÆCIPITATUM.

Riedel's Berichte (1910, p. xxix) points out that precipitated sulphur is readily oxidized in air and reacts slightly acid.

Davis, James E., reports that lac sulphur requires watching. It often contains large amounts of lime salts, and sometimes powdered talc.—Proc. Michigan Pharm. Ass. 1910, p. 64.

Xrayser II notes that the Ph. Brit. IV (1898) made milk of sulphur the synonym of sulphur præcipitatum and asserts that this should be deleted in the next edition.—Chem. & Drug. 1910, v. 77, p. 829.

Sayre, L. E., reports that samples of precipitated sulphur were found to contain from 4 to 50 per cent of calcium sulphate.—Bull. Kansas Bd. Health, 1910, v. 6, p. 53.

Beal, James H., thinks that the reason so many unsatisfactory samples of precipitated sulphur are found is that many of our friends among the wholesale fraternity have not learned the difference between lac sulphur and precipitated sulphur.—Proc. Missouri Pharm. Ass. 1910, p. 17.

Table showing some of the analytical results reported in connection with precipitated sulphur.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Sayre, L. E.	12	4	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.
Lythgoe, Hermann C.	30	13	Rep. Massachusetts Bd. Health, 1910, p. 369.
Whitney, D. V.	5	4	Proc. Missouri Pharm. Ass. 1910, p. 108.
Howard, Charles D.	5	1	Rep. New Hampshire Bd. Health, 1910, v. 21, p 205.
Brown, Lucius P.	4	4	Bull. Tennessee Food and Drugs Insp., 1910, p. 45.
Southall Bros. & Barclay	16	7	Rep. 1910, Birmingham, 1911, p. 30.

SULPHUR SUBLIMATUM.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 30) report that parcels of sublimed sulphur are generally free from arsenic, but some samples are unduly acid.

SUMBUL.

Osborne, Oliver T., thinks that sumbul, its fluid extract and extract are not needed in the next Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 468.

SUPPOSITORIA.

Dohme and Engelhardt state that the Ph. Hung. III directs that suppositories be made with oil of theobroma, or other fatty oils, glyco-gelatin or stearin-soap. They may be formed by hand or made in moulds. Ordinary suppositories should be 3 to 4 cm. long and should have a diameter at the wide part of 1 cm. The thickness of urethral suppositories should be 2 to 3 mm.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1192.

White, R. E., describes and illustrates a suppository mould.—Pacific Pharmacist, 1909–10, v. 4, pp. 368–369.

LaPierre, E. H., discusses methods of making suppositories and points out the need for having the active ingredient thoroughly well and evenly incorporated with the base.—Proc. Massachusetts Pharm. Ass. 1910, pp. 90–94.

SUPPOSITORIA BOROGLYCERINI N. F.

Hallberg, C. S. N., approves the formula proposed for suppositories of boroglycerin by N. F. Sub-committee II.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 28.

SYRUPI.

[NOTE.—Following Government Printing Office style, which is governed by Webster's International Dictionary, the spelling "sirup" is used in this publication.]

Bartlett, H. H., believes that the more generally accepted Latin "Sirupus" is to be preferred to the U. S. P. style "Syrupus," as the former is not alone more widely used but also generally accepted as being the correct form.—J. Am. M. Ass. 1910, v. 54, p. 396. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 87.

Fichtenholz, A., quotes Tschirch as authority for the derivation of the word sirup from the Arabic *scharâb*. [Spanish = jarabe].—J. pharm. et chim. 1910, v. 2, p. ii.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, pp. 257–258; 297–299) discusses the nature of sirups and presents a table according to Schufeldt giving the solubility of sugar in hydro-alcoholic solutions of varying densities.

Hallberg, C. S. N., thinks the introductory article on syrups N. F., should remain.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 29.

Dohme and Engelhardt state that the Ph. Hung. III directs that sirups be prepared by gently heating the sugar with the prescribed amount of the other ingredients. Sirups containing vegetable extracts or fruit juice should be pasteurized.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1192.

Dunning, H. A. B., reviews the sirups of the Ph. Fr. V and points out that the French Codex sirups are of a character distinctly different from those of the U. S. P.—*Ibid.* p. 1156.

Beringer, George M., compares the formulas for U. S. P. sirups with those of some of the foreign pharmacopœias.—*Ibid.* pp. 1241–1245.

Brown, Linwood A., points out that this is one of the most troublesome classes of preparations that the druggist is afflicted with, on account of many of the official sirups seldom being called for.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 161.

Hemm, Francis, asserts that recently prepared sirups are better as a rule than old ones, especially is this true of those which undergo fermentation.—Proc. Missouri Pharm. Ass. 1910, p. 75.

Grauer, N. A., thinks that sugar in many official sirups could be replaced with advantage by glycerin.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 291.

Nixon, C. F., comments on the singular lack of uniformity in the formulas for the pharmacopœial sirups and the unnecessary nicety of some of the processes.—Apothecary, 1910, v. 22, No. 11, p. 19.

Hommell, Philemon E., thinks that the U. S. P. should contain more satisfactory sirups to be employed as vehicles for bitter and nauseous drugs.—Merck's Rep. 1910, v. 19, p. 122.

Thum, John K., believes that the official sirups now directed to be made by the use of fluid extracts should be made from the drug, for the reason that when made from fluid extracts they do not represent the full medicinal value of the drug.—Am. J. Pharm. 1910, v. 82, p. 202.

Beringer, George M., states that, while the U. S. P. has generally adopted the principle of making sirups from fluid extracts, it is characteristic of most of the foreign pharmacopœias that they direct that these preparations be made direct from the drug.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1243.

Goris and Arnould discuss the question of the making of sirups from fluid extracts, and protest quite vigorously against the pharmacopœial requirements.—Bull. sc. pharmacol. 1910, v. 17, pp. 697–705.

The members of the New England Branch of the A. Ph. A. think that soluble tinctures for the preparation of sirup of tar, sirup of tolu and sirup of ginger would be desirable.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 150.

Riedel, J. D., has introduced dried sirups which apparently serve well for the extemporaneous preparation of such sirups as raspberry N. F.—Pharm. Ztg. 1910, v. 55, p. 147.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, pp. 36–37) present a table showing the proposed standards and range of specific gravity for sirups included in the Ph. Brit.

SYRUPUS.

Beringer, George M., points out that the official sirup is usually designated in the foreign pharmacopœias as: syrupus sacchari and syrupus simplex. He thinks the U. S. P. should include tests for glucose.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1244.

Brown, Linwood A., thinks that the making of sirup should receive the druggist's most careful attention to details.—Bull. 150, Kentucky Agric. Exper. Sta. 1910, p. 161.

Renssen (Wien. klin. Rundschau, April 3) is reported to have applied simple sirup in 60 cases of various injuries, including compound fractures, and found that the lesions healed remarkably promptly and well. One very agreeable feature of the sirup treatment is that it can be washed off so readily.—J. Am. M. Ass. 1910, v. 55, p. 77.

SYRUPUS ACIDI HYDRIODICI.

Grauer, N. A., recommends that sirup of hydriodic acid be made with glycerin instead of sugar.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 291.

SYRUPUS AURANTII.

Hommell, Philemon E., thinks that sirup of orange peel should be made from the fluid extract, glycerin and sirup. The citric acid in the formula is objectionable because of its incompatibility with carbonates, salicylates and other agents.—Merck's Rep. 1910, v. 19, p. 121.

SYRUPUS BROMIDORUM N. F.

The Ohio Valley Druggists' Association suggests that compound tincture of cudbear be omitted from sirup of bromides, N. F., as the tincture of vanilla and the compound sirup of sarsaparilla are quite sufficient to give a color.—Proc. Ohio Pharm. Ass. 1910, p. 66.

SYRUPUS CALCIS.

Osborne, Oliver T., thinks there is probably no use in the next Pharmacopœia for sirup of lime, the lime water when needed answering all therapeutic purposes. As an antacid it would seem to be contraindicated.—J. Am. M. Ass. 1910, v. 54, p. 291.

SYRUPUS FERRI IODIDI.

Dohme and Engelhardt outline the Ph. Hung. III method for making sirup of ferrous iodide.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1192.

Manseau, A., contributes a note on sirup of iodide of iron.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 344–346.

Raubenheimer, Otto, points out that in former years the sirup of ferrous iodide contained: 0.5 per cent FeI_2, Belgium and France; 1 per cent, Mexico and Switzerland; 10 per cent, United States, Denmark and Sweden; and 12.2 per cent, Hungary.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1136.

Beringer, George M., points out that the U. S. P. and most of the foreign pharmacopœias have followed the recommendations of the Brussels Conference in regard to the strength of sirup of ferrous iodide. He also notes that the Ph. Helv. and Ph. Austr. direct the use of citric acid as a preservative while other pharmacopœias omit preservatives.—*Ibid.* p. 1244.

Thum, John K., outlines his method of making sirup of ferrous iodide. He recommends the deletion of the hypophosphorous acid, believing that the use of preservatives in medicines, as well as in foods, should not be encouraged by pharmacists.—Bull. Am. Pharm. Ass. 1910, v. 5, pp. 646–647. Also Am. Druggist, 1910, v. 57, p. 130, and Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1261–1262.

Toplis, William G., recommends the use of reduced iron in place of iron wire in the making of sirup of ferrous iodide.—Am. J. Pharm. 1910, v. 82, p. 251. See also Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1258–1259.

Members of the Denver Branch of the A. Ph. A. recommend preserving sirup of ferrous iodide with citric acid instead of dilute hypophosphorous acid. The green color of the preparation is well kept by this method.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 166.

Thome, E. R., thinks that the present formula for sirup of ferrous iodide should be retained notwithstanding the reports that it is not satisfactory.—Practical Druggist, 1910, v. 28, p. 123.

Rudd, Wortley F., submits abstracts of work done by several of his students on sirup of iron iodide and other iron preparations, with special reference to their stability and purity.—Proc. Virginia Pharm. Ass. 1910, pp. 67–70.

Table showing some of the analytical results reported in connection with sirup of ferrous iodide.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Sayre, L. E.	18	7	Proc. Am. Pharm. Ass., 1910, v. 58, p. 1096.
Wulling, Fredrick J.	3	3	Northwestern Druggist, 1910, v. 11, Sept., p. 25.
Hudson, T. G.	32	20	Bull. Georgia Dept. Agric. 1910, No. 51, pp. 145–146.
Arny, H. V.	14	4	Proc. Ohio Pharm. Ass. 1910, p. 70.

SYRUPUS FERRI, QUININÆ ET STRYCHNINÆ PHOSPHATUM.

LaWall, Charles H., states that a method for the separation of quinine and strychnine is necessary in sirup of phosphates of iron, quinine and strychnine.—Am. J. Pharm. 1910, v. 82, p. 26.

SYRUPUS HYPOPHOSPHITUM.

Koch, William J., points out that sirup of hypophosphites U. S. P., ferments quickly. If the formula cannot be improved it should be dropped as elixir of hypophosphites readily replaces it.—Am. Druggist, 1910, v. 56, p. 239.

SYRUPUS HYPOPHOSPHITUM COMPOSITUS.

Dohme and Engelhardt present the Ph. Hung. III formula for compound sirup of hypophosphites.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1192.

Thome, E. R., asserts that the formula for compound sirup of hypophosphites has given him "endless" trouble by fermenting soon after manufacture. The sugar is inverted in a few weeks and the result has been, in some cases, violent explosions. It was found necessary to add a harmless preservative.—Practical Druggist, 1910, v. 28, p. 123.

Sass, Stephen K., recommends that the amount of sugar in the compound sirup of hypophosphites be increased and the water correspondingly decreased.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1245.

Dunning, H. A. B., states that he originally suggested the present formula for the compound sirup of hypophosphites but he did not suggest the insufficient amount of sugar directed in the formula. He agrees with Sass that the sugar should be increased and the water correspondingly decreased.—*Ibid.* p. 1246.

Hommell, Philemon E., thinks that the sirup of hypophosphites and compound sirup of hypophosphites could be improved, so far as appearance and permanency are concerned, by the addition of a proper amount of glycerin.—Merck's Rep. 1910, v. 19, p. 123.

Thum, John K., thinks that the addition of 10 per cent of glycerin to the formula for compound sirup of hypophosphites would enhance both the appearance and the keeping quality of the preparation.—Am. J. Pharm. 1910, v. 82, p. 201.

The Ohio Valley Druggists' Association suggests using 20 per cent of glycerin in place of a similar amount of sugar in compound sirup of hypophosphites.—Proc. Ohio Pharm. Ass. 1910, p. 66.

Hartz and McElhenie state that, when the compound sirup of hypophosphites is kept for some weeks on the shelf at the ordinary temperature of the store, a flocculent formation appears just under the surface. This will not occur if a weak solution of phenol 0.1 of 1 per cent is used, instead of water, for making the solution of alkaline hypophosphites.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1269.

Sayre, L. E., reports on 1 sample of compound sirup of hypophosphites: illegal.—*Ibid.* p. 1096.

SYRUP OF IODO-TANNIN.

Vigneron presents some considerations on the subject of the preparation of iodotannic sirup.—Bull. sc. pharmacol. 1910, v. 17, pp. 33–35.

See also Mansier, *Ibid.* pp. 460–468.

Harlay, V. (Bull. Soc. pharm. Bordeaux) outlines a method for the preservation of the iodo-tannin sirup of the Ph. Fr. V.—J. pharm. Anvers, 1910, v. 66, p. 104.

See also *Ibid.* p. 220.

Raimondi, C., discusses the composition of iodotannic preparations.—Boll. chim. farm. 1910, v. 49, pp. 45–50.

SYRUPUS PHOSPHATUM COMPOSITUS N. F.

Nitardy, F. W., reports experiments on the keeping qualities of compound sirup of the phosphates N. F., and suggests that this preparation be kept on ice.—Rocky Mountain Druggist, 1910, v. 24, Oct. p. 29.

Members of the Denver Branch of the A. Ph. A. call attention to the fact that compound sirup of phosphates, N. F., precipitates on standing a comparatively short time. M. Robbins suggests that the omission of tincture of cudbear from the preparation would prevent this trouble.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 167.

The Ohio Valley Druggists' Association suggests that caramel be used in place of compound tincture of cudbear in making compound sirup of the phosphates N. F.—Proc. Ohio Pharm. Ass. 1910, p. 66.

SYRUPUS PINI STROBI COMPOSITUS N. F.

Hommell, Philemon E., thinks that a formula for compound sirup of pine devoid of morphine should be included in the U. S. P.—Merck's Rep. 1910, v. 19, p. 123.

Hallberg, C. S. N., asserts that compound sirup of white pine is equally efficient without the morphine. The little chloroform present acts as a sedative and in conjunction with the benzosalicylic acid of the "Balm of Gilead Buds" has a beneficial effect on the bronchial mucosa and stops "tickling" in the throat. He advises leaving out the morphine.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 29.

Dunn, Milton R., recommends omitting the morphine from sirup of white pine N. F.—Proc. Pennsylvania Pharm. Ass. 1910, p. 340.

Nitardy, F. W., presents a formula for sirup of white pine compound with codeine and tar.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 96. See also Am. Druggist, 1910, v. 56, p. 106.

SYRUPUS PRUNI VIRGINIANÆ.

Dunning, H. A. B., thinks that the sirup of wild cherry prepared in accordance with the formula of the Pharmacopœia 1890 revision, produces a preparation essentially superior to the product obtained from the U. S. P. VIII formula.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 1128–1129. See also Drug Topics, 1910, v. 25, p. 164.

Hallberg, C. S. N., states that the formula in the U. S. P. 1890 for sirup of wild cherry was evolved from a formula by John W. Reeder, a graduate of the Philadelphia College of Pharmacy in 1876, this being the subject of his thesis.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1128.

SYRUPUS RUBI IDÆI N. F.

Derlin, L., reports observations on the composition of sirup of raspberry and presents the results of a number of examinations in the form of a table.—Pharm. Ztg. 1910, v. 55, pp. 828–829.

Wiebelitz, H., comments on the paper by Derlin and points out the difficulty of establishing the value of sirup of raspberry produced by manufacturers.—*Ibid.* pp. 868–869.

Derlin, L., replies to the comments made by Wiebelitz, pp. 957–958; and Wiebelitz replies, p. 971.

Kochs presents a report on the systematic examination of sirup of raspberries made from different varieties of the fruit in different years.—*Ibid.* pp. 1046–1047.

TALCUM.

Xrayser II, quoting the Oxford English Dictionary, states that talc is Arabic *talq*, but some authorities think it originally Persian.—Chem. & Drug. 1910, v. 77, p. 549.

Gunn, Alex., discusses the identity of French chalk and talc and urges that more prominence be given in the pharmacopœia to the subject of talc; that it be given a monograph of its own in the Ph. Brit.—Pharm. J. 1910, v. 30 (84), p. 176.

Ford, Lacy T., presents the tabulated reports of his qualitative and quantitative estimation of the constituents of commercial talcum powders.—Proc. Virginia Pharm. Ass. 1910, pp. 95–99.

Pearson, W. A., reports that a sample of talc was found which lost 8.06 per cent on ignition.—Proc. Pennsylvania Pharm. Ass. 1910, p. 146.

The members of the New England Branch of the A. Ph. A. think that talcum is unsatisfactory as an absorbent powder in making waters, etc., and could well be replaced by calcium phosphate or pumice.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 150.

Stich, Conrad, discusses the sterilization of talcum and of kaolin.—Pharm. Ztg. 1910, v. 55, pp. 927–928.

TAMARINDUS.

Xrayser II, quoting the Oxford English Dictionary, states that Tamarind is Arabic *tamr-hindi* (date of India).—Chem. & Drug. 1910, v. 77, p. 549.

Harris, Wm., states that the tamarind tree was probably brought to Jamaica from Africa and was already common in 1687.—Bull. Dept. Agric., Jamaica, 1910, v. 1, No. 3, pp. 187–188.

TARAXACUM.

Fichtenholz, A., quotes Tschirch as authority for the derivation of the word taraxacum from the Arabic *tarachakün*, a plant analogous to chicory, or from *taraxis*, a disease of the eyes and *akeomai*, to cure.—J. pharm. et chim. 1910, v. 2, p. ii.

Xrayser II, quoting from the Oxford English Dictionary, states that taraxacum, originally Persian, however also comes to us through Arabic; it means literally "bitter herb," and first occurs in a Latinized form as *tarasacon*, in a manuscript of 1189.—Chem. & Drug. 1910, v. 77, p. 549.

Rusby, H. H., states that he has met with ground dandelion which consisted wholly of the peelings of chicory.—Practical Druggist, 1910, v. 27, p. 423. See also Drug. Circ. 1910, v. 54, p. 7.

Kebler, L. F., reports finding a sample of ground taraxacum which contained approximately 25 per cent of ground stones.—Proc. Maryland Pharm. Ass. 1910, p. 121.

Thome, E. R., thinks that the alkali in fluid extract of taraxacum does more harm than good, by causing voluminous precipitation. He thinks it should be left to the dispenser to add when necessary.—Practical Druggist, 1910, v. 28, p. 122.

The Committee of Reference in Pharmacy thinks that extractum taraxaci liquidum should be made by percolation with alcohol (30 per cent) as it then keeps better.—Brit. & Col. Drug. 1910, v. 58, p. 12.

Osborne, Oliver T., thinks that taraxacum, its fluid extract and extract could well be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 377.

TEREBENUM.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 74) report that 7 samples of terebene were tested, and of these 6 possessed slight optical activity, varying between +2° and −2°. The boiling points possessed a smaller range than that allowed by the Ph. Brit., varying only from 165° to 172°. Two samples had, however, a slightly higher specific gravity than the Ph. Brit. limit of 0.866.

Rippetoe, John R., thinks that the absence of more than a trace of resinous substances should be determined quantitatively. He notes that four samples contained respectively, 1.69, 1.79, 0.92 and 1.60 gm. in 100 cc., and asks if this is "a very slight residue."—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1064.

TEREBINTHINA.

Akerman, B., is quoted as stating that the center of the turpentine industry will soon be in Mexico, where there are vast forests which have not been taken up.—Southern Pharm. J. 1909–10, v. 2, p. 219.

Riedel's Berichte (1910, p. xxix) points out that turpentine never becomes absolutely clear in a water bath but requires a higher temperature.

Leskiewicz, Stanislaus, presents a contribution to the chemistry of turpentine in which he reports experiments to determine the nature of the solid constituents in turpentine from *Pinus sylvestris.*—J. prakt. Chem. 1910, v. 81, pp. 403–420.

Sayre, L. E., reports on 2 samples of turpentine: 1 passed; 1 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.

TEREBINTHINA CANADENSIS.

Schaller, Waldemar T., reports observations on the refractive index of Canada balsam. The average value for a number of observations was found to be 1.5395°.—Am. J. Sc. 1910, v. 29, p. 324.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 19) report on 5 samples of Canada balsam: acid value, 80 to 82.6; saponification value, 86 to 106. Fixed oil was absent in each case.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, p. 7) report that 2 specimens of Canada balsam have been examined, with satisfactory results; acid value, 85.51 and 79.50; saponification value, 93.51 and 85.88.

TERPINI HYDRAS.

Eldred, Frank R., reports that twelve lots of terpin hydrate had melting points between 115° and 117°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 897.

Hain, W. A., presents a formula for a perfect solution and satisfactory preparation of terpin hydrate.—*Ibid.* pp. 1259–1260. Also Bull. Am. Pharm. Ass. 1910, v. 5, p. 524.

Webb, Edward N., discusses the making of elixir of terpin hydrate and presents a formula requiring a considerable amount of glycerin, which he thinks overcomes the difficulty.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 421.

Manseau criticizes the Ph. Fr. V formula for elixir of terpene.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 392–394.

THEOBROMA.

An editorial (N. A. R. D. Notes, 1910–11, v. 11, p. 130) points out that cacao or chocolate is of sufficient importance to be included in the forthcoming Pharmacopœia; and asserts that the words cacao and chocolate are generally used synonymously, though the title chocolate is preferably applied to the sweetened product, either in cakes or as a finished syrup.

Prochnow, A., reviews the methods that have been suggested for estimating the fat content of cacao and chocolate and also reports experiments on the testing of oil of theobroma for foreign fats and oils.—Arch. Pharm. 1910, v. 248, pp. 81–86.

THEOBROMINE.

Hunt, Reid, reports that theobromine is included in the Ph. Austr., Ph. Arg., Ph. Ndl., Ph. Fr., Ph. Mex., Ph. Hisp., Ph. Svec., Ph. Helv.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

Riedel's Berichte (1910, p. liv) presents a monograph giving the composition, properties and tests for theobromine.

THEOBROMINE SODIUM SALICYLATE.

Hunt, Reid, reports that theobromine sodio-salicylate is included in the Ph. Austr., Ph. Belg., Ph. Dan., Ph. Ndl., Ph. Germ., Ph. Hung., Ph. Ital., Ph. Japon., Ph. Mex., Ph. Hisp., Ph. Svec. and Ph. Helv.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

Anneler, E., presents a method for the quantitative estimation of theobromine in theobromine sodium salicylate.—Pharm. Ztg. 1910, v. 55, p. 205.

Jäggi reviews several recently published methods for determining theobromine in theobromine sodium salicylate.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 569–574.

Wood, H. C., Jr., states that theobromine sodium acetate seems less prone to upset the stomach than the combination with sodium salicylate and is probably therefore preferable.—J. Am. M. Ass. 1910, v. 55, p. 31.

THYMOL.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 150) comment on the economic condition of the market in connection with thymol. See also *Ibid.* October 1910, p. 154.

Menge, George A., in a study of melting point determinations, reports on 7 samples of thymol which were found to melt at from 50.1° to 50.8°, corrected.—Bull. No. 70, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, p. 95. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1043.

Schimmel & Co. (Semi-Annual Report, April 1910, p. 127) in commenting on the Ph. Hung. III requirement for thymol, point out that thymol boils at 232° (753 mm.) when the entire mercury thread is surrounded by the steam. The Pharmacopœia requires that it have a specific gravity at 15° of 1.028, but does not say how this difficult determination is to be carried out.

They also (*Ibid.* p. 132) review the Ph. Ital. III requirements for thymol.

Raubenheimer, Otto, states that only recently a case came to his notice where a physician prescribed acid thyminic and the pharmacist dispensed acid thymic (thymol).—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1090.

Henderson and Sutherland, in a contribution to the chemistry of the terpenes, report observations on a monocyclic terpene from thymol.—J. Chem. Soc., Lond., 1910, v. 97, pp. 1616–1620.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 75) report that 7 samples of white thymol tested melted between 43° and 44° in contact with water, or from 50° to 51° when observed in a dry capillary.

Guillaumin, C., presents a chemical and pharmacological study of two new isomers of thymol, para- and orthothymol, and concludes that the therapeutic value of the natural thymol seems to be superior to that of these isomers, particularly in their employment as anthelmintics.—Bull. sc. pharmacol. 1910, v. 17, pp. 373–380.

Lindeman, Edward E., discusses the treatment of hookworm disease by thymol.—J. Am. M. Ass. 1910, v. 54, pp. 1765–1768.

Harris, H. F., discusses the treatment of hookworm disease, outlines his method of administering thymol, and cautions against the use of castor oil or other fatty oils in connection with thymol.—Merck's Arch. 1910, v. 12, pp. 175–176.

Schmidt, Ernst Willy, reports a comprehensive study on the bactericidal value of thymol.—Ztschr. physiol. Chem. 1910, v. 67, pp. 412–432.

Buckley, J. P., presents a number of formulas illustrating the possible use of thymol in dental practice.—Dental Cosmos, 1910, v. 52, pp. 429–437.

THYMOLIS IODIDUM.

Brissemoret and Blanchetière contribute a brief note on a method of formation of dithymol.—Bull. Soc. chim. France, 1910, v. 7, p. 235.

Elvove, Elias, in a note on the assay of halogen compounds of the U. S. P., discusses the assay of thymol iodide, and outlines a general mode of procedure.—Am. J. Pharm. 1910, v. 82, pp. 403–409.

Amsden, Henry H., reports a case of dermatitis from aristol.—J. Am. M. Ass. 1910, v. 54, p. 2042.

TINCTURÆ.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, pp. 381–384) presents a definition for tinctures and discusses some of the preparations now included in the Pharmacopœia.

Havenhill, L. D., reports general processes for making tinctures in which he outlines directions for preparing the percolator and the drug, and calls attention to the precautions to be followed in percolation.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 785–792.

Jung, Ed., reports observations to determine the length of time required for extracting various drugs by maceration. He concludes that in case of necessity maceration for 3 days will give satisfactory results, providing, of course, temperature and shaking requirements have been observed.—Apoth. Ztg. 1910, v. 25, pp. 979–980.

Cook, E. Fullerton, presents a comparison of the tinctures of the more important pharmacopœias of the world and defines a tincture as an alcoholic preparation containing the extractive matter or the active constituent of a drug. He points out that in the pharmacopœias of the world the title of tincture is applied variously to infusions, spirits, acid solutions, toothache drops, simple solutions of chemicals, etc.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1247.

Kraemer, Henry, points out that the Ph. Ndl. permits the use of either percolation or maceration in the making of tinctures unless a special method is given. All of the tinctures of potent drugs are directed to be made by percolation.—Am. J. Pharm. 1910, v. 82, p. 524.

Dohme and Engelhardt state that according to the Ph. Hung. III tinctures are to be prepared by maceration and percolation, generally in the proportions of 1 part of the drug to 10 parts of the menstruum, as adopted by the Brussels Conference, 1902. Stronger tinctures (20 per cent) of indifferent drugs are also allowed.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1192.

Wulff, C., points out that the Ph. Ital. III directs that tinctures of potent drugs be made strictly in compliance with the requirements of the Brussels Conference.—Apoth. Ztg. 1910, v. 25, p. 920.

Ceasar & Loretz (Pharm.-Ber. D. A. B. 5 [1910] 1911, p. 58) point out that the Ph. Germ. V has retained the former method for making tinctures by maceration.

Dunning, H. A. B., reviews the tinctures of the Ph. Fr. V, and points out that they are prepared by maceration, simple solution or by percolation, the latter process being used only with those tinctures which conform to the requirements of the Brussels Conference. The alcoholic strength of these preparations ranges from 60 to 95 per cent.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1156.

Wilbert, M. I., states that in 1903 he ventured the opinion that the proposed international standard menstruum for tinctures would be found to be satisfactory because of the fact that the keeping qualities of the preparations would be improved; that a smaller portion of the inert materials would be extracted and that therefore less precipitation would take place. This opinion has been amply verified in practice, as international standard tinctures made more than seven years ago are still clear while corresponding preparations made with the U. S. P. VII menstruum of diluted alcohol generally precipitated heavily within a few years at most.—*Ibid.* p. 1145.

Scoville, W. L., reports observations on the permanence of alkaloidal fluid extracts and tinctures, and presents a table giving his result of assays during a period of from one to three years.—*Ibid.* pp. 874-883.

Waldner, Paul J., presents some criticisms of the tinctures of the United States Pharmacopœia.—*Ibid.* pp. 1281-1285.

Southall Bros. & Barclay (Rep. 1910, Birmingham, 1911, pp. 37-39) present a table showing the proposed standards, range of specific gravity, and range of percentage by volume of alcohol for tinctures included in the Ph. Brit.

Pollard, J. W., reports on 40 samples of official tinctures examined for the percentage of extractive matter and the percentage of alcohol. The results show wide variation in the percentage of these two factors.—Proc. Massachusetts Pharm. Ass. 1910, pp. 159-160.

Dulière, W., points out some of the difficulties of the chemical control of tinctures and discusses the desirability of having preparations of this type made by the pharmacist in his own laboratory.—Compt. rend. Congr. Internat. Pharm. 1910, (Brussels, 1911), p. 48.

An unsigned article (Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 2–4) reviews several recently published methods for detecting wood alcohol or denatured spirit in tinctures.

An editorial (N. A. R. D. Notes, 1910–11, v. 11, p. 504), in commenting on the desirability of including fifty per cent tinctures in the U. S. P., thinks there is indeed something behind the scenes in American pharmacy.

Hereth, F. S., suggests that a tincture made from an assayed fluid extract would certainly be better than one made from a drug of unknown strength.—Practical Druggist, 1910, v. 28, p. 64.

Caspari, Charles, jr., expresses the belief that under existing food and drugs laws it would not be permissible to make tinctures from fluid extracts, as the resulting product would not comply strictly with the requirements of the Pharmacopœia.—Proc. Maryland Pharm. Ass. 1910, p. 145.

Beringer, George M., thinks that while the making of tinctures from fluid extracts may be permissible, the great danger is in the abuse. He has had occasion to examine preparations made from fluid extracts and has been able to compare such with the U. S. P. preparations, and the difference was very marked.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 782.

Hommell, Philemon E., discusses the uses of the U. S. P. tinctures and expresses the hope that the next Revision Committee will not eliminate many as most of them are valuable therapeutic agents for a wide range of use.—Proc. New Jersey Pharm. Ass. 1910, pp. 53-56.

Haensel, H., comments on the reduced demand for tinctures and other liquid preparations.—Pharm. Ztg. 1910, v. 55, p. 869.

Hill, W. B., thinks that tinctures should be classified in 3 classes according to the strength so that for one class as tinctures of opium, digitalis, etc., 1 cc. would be the average dose, another class of less powerful tinctures so that 5 cc. would be the average dose and so on.—Western Druggist, 1910, v. 32, p. 17.

Havenhill, L. D., questions the desirability of a uniform 10 per cent strength for tinctures and sees no reason for unnecessarily increasing their dose as this would do. He believes that if we are to seek uniformity in the tinctures, we should base this upon the dose.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 782.

TINCTURA ANTIPERIODICA N. F.

Bradford, H. C., discusses the formula for Warburg's tincture, and calls attention to a modification that is being exploited by several manufacturers.—Merck's Rep. 1910, v. 19, p. 63.

Needham, R. H., asks "why keep Warburg's tincture or pills which are nothing more than 'shot guns.' ". The National Formulary committee would hoot at a physician who would write such a prescription today.—Proc. Texas Pharm. Ass. 1910, p. 69.

TINCTURA BRYONIÆ N. F.

LaWall and Bradshaw report finding 2.8 per cent ash in bryonia root.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 751.

Kaufman, L. R. (Med. Century) states that he has seen all the pain and tenderness of appendicitis disappear on administering bryonia, or some other remedy.—J. Am. Inst. Homœop. 1910, v. 2, p. 316.

Monroe, A. Leight, quotes Dean W. Myers who states that bryonia with its headache in the morning and very sore eyes, which are worse on moving them, is indicated in sensitive, pressive pain coming and going in the left eye. It is also useful in iritis caused by cold.—Hahnemann. Month. 1910, v. 45, p. 468.

Felter, H. W., asserts that bryonia is the foe to pain of the sharp, lancinating character, when involving the serous or fibroserous structures. The wiry, irritable pulse is another guide to its selection.—Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 205.

Thomas states that in acute coryza, with acrid secretion, headache in orbital region, attended by more or less cough, bryonia is our best remedy.—Eclectic M. J. 1910, v. 70, p. 62.

TINCTURE OF CACTUS GRANDIFLORUS.

Puckner, W. A., presents the report of the Council on Pharmacy and Chemistry on cactus grandiflorus.—J. Am. M. Ass. 1910, v. 54, p. 888. Also Rep. Council Pharm. & Chem. 1910, pp. 40–44.

An editorial (Nat. Eclec. M. Ass. Quart. 1910, v. 1, p. 284) calls attention to the report of the Council on Pharmacy and Chemistry and concludes that our esteemed friends are responsible for the large amount of patent or proprietary medicines now being consumed, and there is no better way of increasing the amount consumed than by continuing the teaching of therapeutic nihilism.

Thomas, R. L., in an open letter, commenting on the work of the Council on Pharmacy and Chemistry, says "It seems absurd to us to have the erudite but unsophisticated Council of Pharmacy reject remedies like cactus, helonias, dioscorea, echinacea and baptisia (see Journ. A. M. A.), because they are not recommended by Cushny, Brunton, Dixon, Briz, Sollman, or the United States Dispensatory.—Eclectic M. J. 1910, v. 70, p. 157.

Felter asserts that notwithstanding the verdict of the Council of Pharmacy concerning the therapeutic powers of cactus it seems to have been more highly thought of by more eminent experimenters than those who compose that body. * * * It continues to be used with just as much certainty as before.—*Ibid.* pp. 327–328.

Gehe & Co. (Handels-Berichte, 1910, p. 118) report that a fluid extract of *Cactus grandiflorus* L. is being used to some extent in Germany, and while it cannot be used as a substitute for digitalis it may prove useful because of the absence of secondary, cumulative effects.

Sayre, L. W., reports on one sample of cactus grandiflora: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1096.

Hommell, Philemon E., states that tincture and fluid extract of cactus grandiflorus are popular among progressive physicians, on account of their usefulness in functional heart troubles.—Merck's Rep. 1910, v. 19, p. 122.

Solis-Cohen, Solomon, states that he is neither afraid nor ashamed to appear in such excellent company as that of Roland G. Curtin of Philadelphia, in support of the high clinical value of cactus, when a good preparation is properly used, in suitable cases.—P. C. P. Alumni Report, 1910, v. 47, p. 173.

Carmichael, T. H., states that the characteristic indication for the use of cactus grandiflorus is a psychic one; it is a sense of constriction about the heart as if an iron band prevented its normal movement, or, as some expressed it, a feeling as if the heart were grasped tightly in the hand.—J. Am. Inst. Homœop. 1910, v. 2, p. 263.

Monroe, A. Leight, quotes J. B. Brown who states that Cactus Grand is recommended in the treatment of endocarditis when accompanied by great anxiety and pain intense, heart feels as if grasped by an iron band, suffocation, pulse weak and irregular. It never fails when given according to the above symptoms.—Hahnemann. Month. 1910, v. 45, p. 715.

TINCTURE OF CARAMEL.

An editorial (Drug Topics, 1910, v. 25, p. 263) discusses caramel and its adulterants, and points out that the purity and intensity of the coloring power of caramel are dependent on the nature of the substances from which it is made and the manner in which the heating has been conducted.

Carles, P., discusses caramel, its purity, valuation and adulteration.—Ann. chim. analyt. Par. 1910, v. 15, pp. 305–307. See also Ann. Falsif. 1910, v. 3, pp. 255–256.

Lichthardt, G. H. P., outlines an identification test for caramel, by the use of an aqueous solution of tannic and sulphuric acids.—J. Ind. & Eng. Chem. 1910, v. 2, p. 389.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 20) report that one somewhat peculiar sample of caramel examined possessed intense tinctorial properties, and although very fluid was at least 50 per cent stronger than the highest grade viscous varieties; no synthetic dye stuff could, however, be detected.

TINCTURE OF COCCULUS INDICUS.

LaWall and Bradshaw report finding from 4.18 to 4.67 per cent ash in cocculus indicus.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

TINCTURA CRESOLI SAPONATA N. F.

Needham, R. H., thinks that tinctura cresoli saponata was intended to take the place of a well-known proprietary antiseptic and germicide, but it has failed. Its advantage over the compound cresol solution, U. S. P., is nothing; the amount of alcohol is so great as to make it irritating on abrazed surfaces. The U. S. P. preparation is to be preferred by physicians.—Proc. Texas Pharm. Ass. 1910, p. 71.

TINCTURE OF DELPHINIUM.

Raubenheimer, Otto, reports that the National Formulary Revision Committee has decided to admit the tinctures of delphinium and *Coccolus indicus* to the new edition of the N. F.—Am. Druggist, 1910, v. 57, p. 107.

Blair, H. C., suggests a formula for tincture of larkspur.—Proc. Pennsylvania Pharm. Ass. 1910, p. 251.

Eliel, Leo, states that when we consider the purpose for which tincture of larkspur is chiefly used, it would seem unnecessary to burden either the U. S. P. or N. F. with it.—*Ibid.* p. 364.

Wooten, Elmer Ottis, discusses and describes the larkspurs of New Mexico.—Bull. Torrey Bot. Club, 1910, v. 37.

TINCTURA FERRI CHLORIDI ÆTHEREA N. F.

An unsigned article (Nat. Druggist, 1910, v. 40, p. 525) presents some notes on the origin of Bestuscheff's tincture.

Manseau, A., contributes a note on Bestuscheff's tincture, utters a caution as to keeping in yellow or blue bottles and protecting from the light, also as to incompatibility with vegetable tinctures containing tannates.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 158–160.

TINCTURA FERRI CITRO-CHLORIDI N. F.

Thome, E. R., considers tincture of ferric citro-chloride, N. F., of sufficient value to be transferred to the U. S. P. Physicians use it very largely and it has many advantages over the present official tincture.—Practical Druggist, 1910, v. 28, p. 123.

TINCTURE FERRI POMATA N. F.

Dohme and Engelhardt state that the Ph. Hung. III directs that tincture of ferrated extract of apples should contain 0.5 per cent of iron, determined iodometrically.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1193.

TINCTURA IGNATIÆ N. F.

Schneider, Albert, states that the histology of ignatia is like that of nux vomica. Trichomes are almost wholly wanting.—Merck's Rep. 1910, v. 19, p. 191.

An unsigned abstract (Envoy) says some persons are troubled by fixed thoughts. Try ignatia.—J. Am. Inst. Homœop. 1910, v. 2, p. 317.

TINCTURA PERSIONIS N. F.

Engelhardt, Hermann, reports that the coloring power of cudbear is not always satisfactory and it would be advisable for the new Pharmacopœia to adopt a method for standardizing it.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1258.

Huegel, Henry O. A., contributes a note on cudbear coloring. He thinks the variations in color arise from the difficulty of exhausting the drug by percolation.—Proc. Missouri Pharm. Ass. 1910, p. 69.

The Ohio Valley Druggists' Association suggests that in preparations in which tincture of cudbear is directed an equivalent amount of cudbear be used.—Proc. Ohio Pharm. Ass. 1910, p. 66.

TINCTURE OF PASSIFLORA.

Puckner, W. A., reports the reasons for not recognizing passiflora in N. N. R. He concludes that the available evidence is insufficient to show that passiflora has therapeutic value.—Rep. Council Pharm. & Chem. 1910, pp. 44–45.

LaWall and Bradshaw report finding 23.15 per cent ash in passion flower.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

TINCTURE OF PULSATILLA.

Oldberg, Oscar, states that the name pulsatilla is derived from the Latin *pulsatilis,* throbbing.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 757.

LaWall and Bradshaw report finding 7.4 and 9.95 per cent ash in pulsatilla herb.—*Ibid.* p. 754.

Waring, G. P., presents a comparative study of a few of the complementary remedies necessary to cure, after pulsatilla has been well indicated and properly administered. A large majority of the ministers, prohibitionists and socialists are pulsatilla patients, who are so sensitive to wrong-doing that their sympathies are expressed in active reform work.—J. Am. Inst. Homœop. 1910, v. 2, pp. 148–154.

Fornias, E., quotes Wassily who points out that pulsatilla acts chiefly on the mucous membranes, stomach, respiratory tract, female sexual organs, urinary organs, skin, joints, venous system, eyes and ears.—Hahnemann. Month. 1910, v. 54, p. 555.

Monroe, A., Leight, quotes Walter Joel Brown who recommends pulsatilla in the treatment of acne with amenorrhœa; chlorosis; gastric and bilious disorders aggravated by pastry and fat food.—*Ibid.* p. 717.

TINCTURA SAPONIS VIRIDIS COMPOSITA N. F.

Raubenheimer, Otto, thinks that the Latin title for this preparation should be changed in the next edition of the N. F. to the title corresponding to the pharmacopœial title, viz., linimentum saponis mollis compositum.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1231.

Hartz and McElhenie state that in making the compound tincture of green soap, diluted alcohol should be used to prevent crystallization of stearates. They believe that the Committee on Revision may well consider the economic side of the question of lessening the proportion of alcohol in many galenicals.—*Ibid.* p. 1270.

TINCTURA VIBURNI OPULI COMPOSITA N. F.

Hallberg, C. S. N., asserts that the menstruum for compound tincture of viburnum is too strongly alcoholic.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 29.

TINCTURÆ HERBARUM RECENTIUM.

Havenhill, L. D., outlines a modified formula for the tinctures of fresh herbs, arranged so that each 100 cc. would represent the active principles of 10 gm. of dry drug.—Proc. Am. Pharm. Ass., 1910, v. 58, p. 792.

TRAGACANTHA.

Lutz, L., presents a note on the method of formation of gum tragacanth.—Compt. rend. Acad. sc. 1910, v. 150, pp. 1184–1186.

Nathan, Edward L., reports that the yield of gum tragacanth for 1910 will be only about 140 tons, as compared with about 200 tons in 1909. He states that a German botanist who has recently investigated the matter denies that it is from *Astragalus gummifer.* He gives some further data as to collecting and prices.—Cons. & Tr. Rep. 1910, p. 728.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910] 1911, p. 59) point out that the Ph. Germ. V requires that tragacanth contain not more than 3.5 per cent of ash, and that in the making of the powder the substance be dried at a temperature not exceeding 50°. The iodine test has been omitted.

LaWall and Bradshaw report finding 2.45 and 2.7 per cent ash in tragacanth.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Rusby, H. H., states that he has met with tragacanth in very many cases consisting wholly or partly of India gum.—Practical Druggist, 1910, v. 27, p. 424.

Caesar & Loretz (Jahres-Ber. 1910, p. 121) outline their method of testing powdered tragacanth, and the detection of acacia, by the use of guaiacol and hydrogen peroxide.

Beilstein, Christian, asserts that tragacanth is grossly adulterated with starch and that this adulterant is difficult of detection. Even the ribbon-shaped bands have been found containing a considerable proportion of added starch. Indian gum (*Cochlospermum gossypium*) known also under the name of "Kaddaya Gum" is another frequent adulterant. Sarcocolla gum has not been found as an adulterant.—Proc. N. W. D. A. 1910, p. 104.

A news note (Oil, Paint and Drug Reporter, 1910, v. 78, October 31, p. 9) reports that the Acting Secretary of Agriculture has decided that gum tragacanth is not Indian gum.

Feil, Joseph, supplements an earlier report on powdered gum tragacanth by a note on 25 additional samples which presented great variation.—Proc. Ohio Pharm. Ass. 1910, p. 74.

The Apotheker Zeitung says that tragacanth is adulterated with dried starch paste.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 748.

TRIOXYMETHYLENE.

Hunt, Reid, reports that trioxymethylene is included in the Ph. Belg., Ph. Fr. and Ph. Ital.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

Riedel's Berichte (1910, p. xlix) presents a monograph giving the composition, properties and tests for paraformium.

TRITICUM.

Holm, Theo., describes and illustrates the structural characteristics of *Agropyrum repens* (L.) Beauv.—Merck's Rep. 1910, v. 19, pp. 65–68.

LaWall and Bradshaw report finding 3.0 and 3.65 per cent ash in triticum.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Osborne, Oliver T., thinks that neither triticum nor its fluid extract would be missed from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 377.

TROCHISCI.

Hommell, Philemon E., in discussing the extent to which the U. S. P. troches are prescribed, expresses the belief that troches of santonin, potassium chlorate, ammonium chloride, tannin, cubebs, opium and licorice, are about all of the official list prescribed or called for by the public.—Proc. New Jersey Pharm. Ass. 1910, pp. 52–53. See also Merck's Rep. 1910, v. 19, p. 121.

Goldthwaite, N. E., in a contribution on jelly-making, describes methods for making various fruit jellies.—J. Ind. & Eng. Chem. 1910, v. 2, pp. 457–462.

TUBERCULIN.

Hunt, Reid, reports that tuberculin is included in the Ph. Belg., Ph. Fr., Ph. Germ., Ph. Japon. and Ph. Helv.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

Valée and Guinard discuss the physiologic properties of extracts of the bacillus of Koch, condensed and sensitized.—Compt. rend. Acad. sc. 1910, v. 150, pp. 1140–1142.

Fleissig comments on the new tuberculin described by Rosenbach and compares its properties with some of the other tuberculins.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 637–638.

Wilkinson, W. Camac, reports highly successful results from the use of tuberculin in pulmonary tuberculosis.—Brit. M. J. 1910, v. 2, p. 1055.

An editorial (Am. Vet. Rev. 1910–11, v. 38, pp. 5–7) discusses the use of tuberculin in domestic carnivorous animals.

Wilkinson, W. Camac, reports the results of the use of tuberculin in laryngeal tuberculosis.—Brit. M. J. 1910, v. 2, pp. 1705–1707.

Verge, A., contributes a note on the use of old tuberculin ointment in the diagnosis and treatment of lupus vulgaris, with a report of 7 cases.—*Ibid.* p. 2023.

Charlton, Fred R., asserts that the Moro reaction is discredited as a practical test for tuberculosis.—J. Am. M. Ass. 1910, v. 54, p. 969.

Baldwin, Edward R., presents a communication on the general principles of tuberculin diagnosis and treatment.—*Ibid.* p. 260.

Hamman and Wolman make a second report of the cutaneous and conjunctival tuberculin tests in the diagnosis of pulmonary tuberculosis.—Arch. Int. Med. 1910, v. 6, pp. 690–701.

Mills, Percival, contributes a study of von Pirquet's tuberculin reaction in the surgical diseases of children, with an analysis of 223 cases.—Brit. M. J. 1910, v. 1, p. 1159.

See also Bride, J. W., *Ibid.* p. 1161 and Clarke and Forsyth, *Ibid.* p. 1348.

An editorial (Lancet, 1910, v. 179, p. 248) remarks that in France the intradermo-reaction of Mantoux has largely supplanted the original cutaneous reaction of v. Pirquet and calls attention to the serious results from the former, reported by Comby. The severe reaction sometimes caused by the Calmette ophthalmo-reaction has caused its abandonment by many.

Evans and Whitney make a preliminary report of the diagnostic value of the intracutaneous tuberculin test.—Arch. Int. Med. 1910, v. 6, pp. 307–313.

See also Pinard, Gastinel and Vanney.—Compt. rend. Soc. Biol. 1910, v. 69, p. 610.

White and van Norman present a communication on an individual quantitative index to tuberculin dosage in treatment.—Arch. Int. Med. 1910, v. 6, pp. 449–468.

Ridlon, John, as a result of investigations as to the value of tuberculin in the treatment of tuberculous joint disease at the Home for Destitute Crippled Children at Chicago, concludes that tuberculin administered by the clinical method in harmless doses is useless; and that in larger doses it is both dangerous and harmful.—J. Am. M. Ass. 1910, v. 55, p. 49.

Peter, Luther C., presents a note on the use of tuberculin in ophthalmic practice.—Med. Rec. 1910, v. 77, p. 14.

Voorsanger, William C., makes a contribution on the present status of tuberculin therapy.—Am. J. M. Sc. 1910, v. 139, pp. 51–61.

Wolff-Eisner, A., reviews progress in the treatment of tuberculosis more particularly in the use of tuberculin.—Ber. pharm. Gesellsch. 1910, v. 20, pp. 237–257.

Wells, G. Harlan, discusses the clinical application of tuberculin in the treatment of pulmonary tuberculosis.—Hahnemann. Month. 1910, v. 45, pp. 569–580.

Additional references on the various uses of tuberculin will be found in the J. Am. M. Ass., and the Index Medicus.

ULMUS.

LaWall and Bradshaw report finding 9.7 per cent ash in elm bark.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 752.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 30) report that 2 cheap samples of powdered slippery elm bark were obtained; one consisted simply of marshmallow, starch and tragacanth; the other contained added starch, and possessed practically no gelatinizing power.

Mitchell, P. P., says that from a physiological test of 10 samples of elm bark, he found one adulterated with wheat starch, one with corn starch and eight were pure.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 743.

UNGUENTA.

Hallberg, C. S. N., discusses the external preparations of the U. S. P. and the National Formulary.—J. Am. M. Ass. 1910, v. 55, pp. 1079–1082.

An editorial (N. York M. J. 1910, v. 92, p. 329) rather resents the fact that most of our information regarding novelties in ointment formulas is "made in Germany," and thinks this a reflection on the revisers of our Pharmacopœia.

The Pharmaceutical Journal (1910, v. 30 (84), pp. 640–644) chapter in practical pharmacy discusses the making of ointments, and illustrates some of the apparatus used.

Koch, William J., thinks that the U. S. P. VIII has improved ointments a great deal by replacing part of the lard bases by hydrous wool-fat, but there is still room for improvement where lard is used as a basis.—Am. Druggist, 1910, v. 56, p. 239.

Dunning, H. A. B., reviews the ointments of the Ph. Fr. V and states that lard, benzoinated lard and vaseline are the bases used.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1155.

Hommell, Philemon E., thinks that petrolatum is not a desirable addition to ointment, and suggests a more general use of the ointment of the U. S. P. 1890.—Merck's Rep. 1910, v. 19, p. 122.

Mittelbach, Wm., thinks that ointments as a class need careful revision. The substitution of the white wax for the yellow, in recent revisions, is a mistake. The unguentum of the present Pharmacopœia is much inferior to that of 1880. The only apparent excuse for this change being a change of color from yellow to white.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 792.

Braubach, C., presents notes on the qualitative and quantitative analysis of ointments and similar preparations, and outlines the following procedure: (1) Physical examination: color, odor, consistence, taste; (2) microscopic examination; (3) preliminary tests; (4) analysis, qualitative and quantitative; (5) if indicated, preparation of a duplicate and comparison with the original.—Am. J. Pharm. 1910, v. 82, pp. 314–327.

Dulière, W., points out that owing to the complex nature of ointments it is difficult to control their purity and composition by chemical means, and it is therefore desirable to have the preparations made by the person responsible for them.—Compt. rend. Congr. Internat. Pharm. 1910 (Brussels, 1911), p. 49.

An unsigned article (Pharm. Ztg. 1910, v. 55, p. 869) calls attention to the advantage of collapsible tubes for the dispensing of ointments.

Bjerre, Nicolai, describes and illustrates an apparatus for filling collapsible tubes with ointments.—Apoth. Ztg. 1910, v. 25, pp. 151–152.

UNGUENTUM.

Koch, William J., thinks that unguentum simplex might be omitted from the list, although it enters into several ointments. It could be replaced by a wool-fat basis.—Am. Druggist, 1910, v. 56, p. 239.

Thome, E. R., presents a formula for unguentum which he asserts is an improvement over the present one, which yields a product that is unfit for use one month after making.—Practical Druggist, 1910, v. 28, p. 123.

UNGUENTUM ACIDI BORICI.

Anselmino states that one peculiar consequence of the new Ph. Germ. is that the tariff charge for boric acid ointment will now be lower than formerly; due to the fact that it is to be prepared with white vaseline instead of paraffin ointment.—Chem. & Drug. 1910, v. 77, p. 892.

UNGUENTUM AQUÆ ROSÆ.

Thome, E. R., asserts that in ointment of rose water we have a formula that will not remain unchanged for two weeks in warm weather. It should have been dismissed from the U. S. P. years ago as it was not used by any careful physician. A hydro-carbon oil cream should be substituted. Of the latter he asserts there are many good formulas.—Practical Druggist, 1910, v. 28, p. 123.

UNGUENTUM DIACHYLON.

Dohme and Engelhardt state that the Ph. Hung. III directs that for diachylon ointment lard is heated with lead oxide and water and to this petrolatum and oil of lavender are added.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1194.

UNGUENTUM HYDRARGYRI.

Dohme and Engelhardt state that the Ph. Hung. III constituents of mercurial ointment are: mercury, 300 gm.; hydrous wool-fat, 100 gm.; white wax, 50 gm.; lard 550 gm; giving an ointment with 30 per cent of mercury. The latter is determined by a method similar to that of the U. S. P.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1194.

Mittelbach, Wm., suggests that the formula for mercurial ointment should have added some wool-fat. This will expedite the division of the mercury.—*Ibid.* p. 793.

Patch, Edgar L., calls attention to a sample of mercurial ointment which had stood in a warm place and softened, permitting the mercury to separate, and the druggist had not taken pains to triturate to uniform condition before dispensing.—*Ibid.* p. 740.

Lythgoe, Hermann C., reports finding 2 samples of adulterated mercurial ointment; these contained 40.32 per cent and 31.7 per cent of mercury, respectively.—Rep. Massachusetts Bd. Health, 1910, p. 371.

The Massachusetts State Board of Health reports assays of 3 samples of mercurial ointment varying from 9.12 per cent to 26.87 per cent of official strength.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 744.

Sayre, L. E., reports on 8 samples of mercurial ointment: 3 passed; 5 illegal.—*Ibid.* p. 1097.

Beal, George D., calls attention to a report of cases where mercurial ointment has been dispensed which was below strength. This was found to be due to the fact that the ointment had softened during a spell of hot weather thus allowing the mercury to separate. The ointment should have been well triturated before dispensing.—Proc. Ohio Pharm. Ass. 1910, p. 71.

Gundelach, W. J., states that when he has resorted to mercurial inunctions and the patient has mercurial stomatitis and other symptoms of mercury, he has found that mercurius sol. in 1000th potency once a day, or once every two days, would clear up the symptoms, the stomatitis would improve, the patient gain in weight, and, in fact, improve in every way.—J. Am. Inst. Homœop. 1910, v. 2, p. 156.

UNGUENTUM HYDRARGYRI DILUTUM.

Mittlebach, Wm., reports that dilute blue ointment made with lard or benzoinated lard is superior to that made with petrolatum.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 793.

Knight, Henry G., reports the examination of a sample of blue ointment which did not comply either with the requirement for mercurial ointment or diluted mercurial ointment.—Rep. Dairy, Food & Oil Com., Wyoming, 1910, p. 58.

Osborne, Oliver T., thinks the official diluted mercury ointment is superfluous. The official unguentum hydrargyri could be diluted according to need.—J. Am. M. Ass. 1910, v. 54, p. 51.

UNGUENTUM HYDRARGYRI AMMONIATI.

Mittelbach, Wm., reports the suggestion to leave out petrolatum from the white precipitate ointment, and to use just enough water to thoroughly rub out the white precipitate. Mixed with wool-fat it yields a very smooth and nice preparation.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 793.

Rippetoe, John R., suggests that the U. S. P. contain a method of assay for the ointment of ammoniated mercury, and outlines a method that has given him satisfactory results.—Am. J. Pharm. 1910, v. 82, p. 223.

UNGUENTUM HYDRARGYRI NITRATIS.

Mittelbach, Wm., reports that ointment of mercuric nitrate is all right.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 792.

Stanislaus and Aston describe a method for assaying the ointment of mercuric nitrate U. S. P.—Proc. Pennsylvania Pharm. Ass. 1910, pp. 233–235.

Sayre, L. E., reports on 6 samples of citrine ointment: 2 passed; 4 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1096.

Osborne, Oliver T., asserts that the nitrate of mercury ointment is very rarely prescribed and might well be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 51.

UNGUENTUM HYDRARGYRI OXIDI FLAVI.

Osborne, Oliver T., asserts that the yellow oxide of mercury ointment will doubtless act, or could be diluted to act, similarly to the red oxide ointment. There is no need for both.—J. Am. M. Ass. 1910, v. 54, p. 51.

UNGUENTUM PHENOLIS.

Mulhan, Otto, thinks that white petrolatum as a base for phenol ointment is unsatisfactory. The phenol separates out in time. He suggests using a mixture of ointment and white petrolatum.—Midl. Drug. 1910, v. 44, p. 530. Also Proc. Ohio Pharm. Ass. 1910, pp. 65–66.

Weinstein, Abraham, thinks that the present official ointment of phenol is a faulty one because the carbolic acid which is not soluble in petrolatum is thrown out of the incorporation in a very short time and the result is either a dangerous one of getting too much carbolic acid or a worthless one containing none of the phenol. The old formula of using ointment should be restored as the carbolic acid is completely soluble in fats and makes a permanent uniform ointment.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1280.

UNGUENTUM RESORCINI COMPOSITUM N. F.

Hallberg, C. S. N., in connection with compound resorcin ointment, states that by substituting the empyreumatic oil of birch (oleum ruscæ) for oil of cade, an ointment which will not discolor is obtained. The ointment is of a light cream color and physicians who have tried it prefer it to the ointment with oil of cade. One-half of the quantity (6 per cent) is preferred.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 29.

Dulin, William, presents a formula for compound resorcin ointment in which he advocates the use of anhydrous wool-fat in place of the hydrous wool-fat.—Proc. Pennsylvania Pharm. Ass. 1910, p. 342.

Hall and Seltzer present a formula for compound resorcin ointment which they assert to be efficient and stable.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 57.

Hommell, Philemon E., thinks that an improved compound resorcin ointment should be placed in the next U. S. P. The formula now in the N. F. is not as satisfactory as it should be.—Merck's Rep. 1910, v. 19, p. 122.

UVA URSI.

Reum, Arthur W., reports that in commercial uva ursi, two samples showed approximately: 90.0 per cent of leaves and 10.0 per cent of stems; and 88.8 per cent of leaves and 11.2 per cent of stems.—Pacific Pharmacist, 1909–10, v. 4, p. 456.

Osborne, Oliver T., asserts that uva ursi and its fluid extract should be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 377.

VACCINE.

Hunt, Reid, reports that vaccine virus is included in the Ph. Belg. and Ph. Helv.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 772.

Rosenau, M. J., describes the present methods of control of vaccine virus and details the reasons for the introduction of vaccine virus into the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 250. See also editorial p. 295.

Rosenau, Weaver and Baldwin, for the Section on Pathology and Physiology, present the argument for the admission of vaccine virus to the Pharmacopœia.—*Ibid.* p. 1389.

An editorial (Pharm. J. 1910, v. 30 (84), p. 76) calls attention to the importance of the results obtained by Blaxall and Fremlin in the cold storage of vaccine lymph. (See Bulletin 79.)

Wassermann, Sigmund, describes a new method of vaccination, using v. Pirquet's chisel scarificator.—J. Am. M. Ass. 1910, v. 55, p. 997.

Williams, Francis H., describes and illustrates a simple and clean instrument for vaccination, a platinum spud in a glass handle.—Boston M. & S. J. 1910, v. 162, p. 210.

Scott, Clive D., reports two cases of tetanus following vaccination, with one death (St. Louis, Mo.).—Med. Rec. 1910, v. 78, p. 811.

Jordan, G. A., presents a communication on the St. Louis vaccination situation with reference to the occurrence of tetanus among vaccinated children.—J. Am. M. Ass. 1910, v. 55, p. 1748.

The Court of Civil Appeals of Texas confirms the constitutional right of the Board of School Trustees in requiring the vaccination of scholars.—*Ibid.* p. 1669.

An editorial (Med. Rec. 1910, v. 77, p. 451) refers to the report of Goldschmidt (Rev. Méd. September 1909) as to the results of vaccinations practiced since 1872 on many thousands of children.

Sandwith, F. M., contributes an article on the value of vaccination and revaccination.—Lancet, 1910, v. 179, p. 1825.

The Lancet (1910, v. 178, p. 1640) quotes from the annual report of the Sanitary Commissioner with the Government of India for 1908 the statistics of 9,123,262 vaccinations during the previous year.

Additional references on the history and use of vaccination and accidents following its use, will be found in the J. Am. M. Ass., and Index Medicus.

VALERIANA.

Oldberg, Oscar, states that the name valeriana is derived from the Latin name, *valerius*, or its origin, *valere*, to be strong.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 757.

LaWall and Bradshaw report finding 20.15 per cent ash in valerian root.—*Ibid.*, p. 754.

Hagaeus, John, reports observations on the ash content of valerian and of powdered valerian. He suggests that the maximum ash content of this drug be fixed at 10 per cent.—Svensk farm. Tidskr. 1910, v. 14, pp. 53–57.

Havenhill, L. D., outlines modified formulas for tincture of valerian and ammoniated tincture of valerian.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 792.

Osborne, Oliver T., would omit the fluid extract and tinctures of valerian.—J. Am. M. Ass. 1910, v. 54, p. 468.

VANILLA.

Gehe & Co. (Handels-Bericht, 1910, p. 70) present figures showing the amount of vanilla produced in the different countries. The estimates for 1910, exclusive of Mexico, aggregate a total of 177,000 kilos.

An editorial (Oil, Paint and Drug Reporter, 1910, v. 78, December 26, p. 8), in a discussion on the status of vanilla beans, presents a table showing the fluctuations in price of Mexican and Bourbon beans over a period of 12 years.

Carter, Jas. G., reports on the cultivation of vanilla in Madagascar, Comoro, Reunion and Seychelles Islands.—Am. Perf. 1910–11, v. 5, pp. 224–225. Also Oil, Paint and Drug Reporter, 1910, v. 78, December 26, p. 26.

McClintock, Samuel, reports on the methods of preparing the wild vanilla bean for market in Honduras.—Am. Perf. 1910–11, v. 5, p. 225.

Gautier and Kling discuss the production and the properties of Tahiti vanilla, and present some figures showing the amount produced and the destination of the product.—Ann. Falsif. 1910, v. 3, pp. 200–201.

Dreher, Julius D. (in a Consular Report), discusses the growing and curing of vanilla in the Society Islands.—Oil, Paint and Drug Reporter, 1910, v. 78, November 28, p. 25. Also Am. Perf. 1910–11, v. 5, pp. 199–201; 205.

Heckel, Édouard, discusses the action of cold and of anæsthetics on the leaves of *Angræcum fragrans* Thou. (Faham) and on the green vanilla beans, and suggests the possibility of shortening the necessary operations in the industrial preparation of vanilla as well as of avoiding accidents incident to the process of drying.—Compt. rend. Acad. sc., 1910, v. 151, pp. 128–131.

Caesar & Loretz (Jahres-Ber. 1910, p. 32) express their preference for the Bourbon variety of vanilla. They also report that the total crop of vanilla, exclusive of Tahiti, for the year 1909–10 will aggregate 411,000 kg., as compared to 591,400 kg., the crop for 1908–9, a net reduction of 180,400 kg.

Iserman, Samuel, discusses the chemistry of vanilla beans, and comments on the character of their constituents in general.—Am. Perf. 1910–11, v. 5, p. 89. Also Western Druggist, 1910, v. 32, pp. 358–362.

Mulhan, Otto, suggests a process for exhausting the drug in making tincture of vanilla.—Proc. Ohio Pharm. Ass. 1910, p. 65. Also Midl. Drug. 1910, v. 44, p. 530.

Beringer, George M., thinks that the directions for making tincture of vanilla should be rewritten to clarify.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 782–783.

Havenhill, L. D., outlines a modified formula for the tincture of vanilla.—*Ibid.* p. 792.

Hommell, Philemon E., thinks that tincture of vanilla and tonka should be introduced as a tincture of this kind is seemingly highly esteemed by the public.—Merck's Rep. 1910, v. 19, p. 122.

Table showing some of the analytical results reported in connection with tincture of vanilla.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Hill, Edward C	1	1	Bull. Colorado Bd. Health, 1910, v. 10, No. 1, p. 4.
Hill, Edward C	5	2	*Ibid.*, No. 2, pp. 4–5.
Potter, Hubert F	20	14	Rep. Connecticut Dairy and Food Com. 1910. Hartford 1911, pp. 123–124.
Connecticut Agri. Experiment Station.	81	30	Proc. Am. Pharm. Ass. 1910, v. 58, p. 748.
Hudson, T. G	18	5	Bull. Georgia Dept. Agric. 1910, v. 51, pp. 48–50.
Lythgoe, Hermann C	1	1	Rep. Massachusetts Bd. Health, 1910, p. 356.
Howard, C. D	8	3	New Hampshire San. Bull. 1910, v. 3, pp. 155, 177.
Howard, Charles D	35	16	Rep. New Hampshire Bd. Health, 1910, v. 21, p. 175.
Brown, Lucius P	27	14	Bull. Tennessee Food and Drugs Insp. 1910, p. 17.
Cutler, William P	13	5	Ann. Rep. Food & Dairy Com. Missouri 1910, p. 36.

Notices of Judgment No. 242, 320, 389 relate to adulteration and misbranding of vanilla extract.

Thome, E. R., asserts that simple tests for the detection of caramel, added vanillin, coumarin, methyl alcohol and for the presence of vanilla resins should be given for tincture of vanilla.—Practical Druggist, 1910, v. 28, p. 123. See also Merck's Rep. 1910, v. 19, pp. 185–186.

Caspari, C. E., states that the determination of the alkalinity of ash is important in the detection of spurious extract of vanilla.—Proc. Am. Pharm. Ass. 1910, v. 58, pp. 755–756.

Parry, Ernest J., discusses the composition of essences of vanilla and comments on the adulteration of vanillin.—Am. Perf. 1910–11, v. 5, pp. 245–246.

Caesar & Loretz (Jahres-Ber. 1910, p. 15) point out that they now market a 10 per cent mixture of Bourbon vanilla and sugar in place of the 1 + 3 mixture formerly marketed by them.

For a number of references to vanilla, production, markets, etc., see J. Agric. trop. 1910, v. 10.

VANILLINUM.

Menge, George A., in a study of melting point determinations, reports on 5 samples of vanillin which were found to melt at from 81.9° to 82.5°, corrected.—Bull. No. 70, Hyg. Lab. U. S. Ph. H. & M.-H. S. 1910, p. 96. See also Proc. Am. Pharm. Ass. 1910, v. 58, p. 1043.

Eldred, Frank R., reports that twenty-four lots of vanillin melted between 80° and 80.5°, two lots at 79.5°, and three lots at 81°.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 898.

Guyot and Gry describe certain new syntheses of vanillin.—Bull. Soc. chim. France, 1910, v. 7, pp. 902–913. See also Schimmel & Co., Semi-Annual Report, April 1910, p. 150.

Mittelbach, Wm., thinks that vanillin looks too much like a substitute preparation and ought not to be retained in the U. S. P.—Proc. Missouri Pharm. Ass. 1910, p. 98.

Wiley, H. W., reports that at the New York laboratory an interesting study has been made of a method for the determination of benzaldehyde, cinnamic aldehyde, and vanillin, based on the fact that these aldehydes form insoluble semicarbazones with semicarbazides.—Ann. Rep. U. S. Dept. Agric. 1910, 1911, p. 472.

Chace, E. M., in the referee report on flavoring extracts, discusses the determination and identification of vanillin and coumarin.—Proc. Ass. Off. Agric. Chem. 1910, 27th Ann. Conv. pp. 68–72. (Bull. Bur. Chem. U. S. Dept. Agric. 1911, No. 137).

Parry, Ernest J., discusses the adulteration of vanillin and enumerates some of the adulterants that have been found.—Am. Perf. 1910–11, v. 5, p. 245.

VERATRINA.

Murray, B. L., thinks that the melting point of veratrine is stated too definitely in the U. S. P.—Am. Druggist, 1910, v. 57, p. 384.

Rosenthaler and Görner, in a report of observations on the use of aromatic nitroderivatives as precipitants for alkaloids, point out that with many of these substances veratrine gives a dense precipitate. Trinitrophloroglucin and tetranitrophenolphthalein were found to be more sensative than picric acid.—Ztschr. anal. Chem. 1910, v. 49, p. 351.

LaWall, Charles H., reports that there should be a process of assay given under oleatum veratrinæ, together with satisfactory tests for the identification of the separated alkaloid.—Am. J. Pharm. 1910, v. 82, p. 24.

Koch, William J., asserts that for veratrine ointment, an ointment base consisting of 1 part hydrous wool-fat, and 3 parts petrolatum will make a nice smooth, absorbent ointment.—Am. Druggist, 1910 v. 56, p. 239.

Osborne, Oliver T., considers veratrine ointment to be dangerous; it should not be made official.—J. Am. M. Ass. 1910, v. 54, p. 51.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, pp. 369) calls attention to a paper by Maetzke (Zeitschr. f. ärzt. Fortbildung, 1909, No. 22; Deut. Ärztezeitung, 1910, No. 8) on the internal administration of veratrine in cholera nostras.

VERATRUM.

LaWall and Bradshaw report finding 14.95 per cent ash in veratrum viride.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Scoville, W. L., thinks that veratrum should be assayed and its preparations standardized.—*Ibid.* p. 823.

Eldred, Frank R., reports that in 1908 five lots of veratrum assayed 1.33, 1.9, 1.94, 1.21, and 1.66 per cent. In 1909 four lots assayed 1.60, 1.53, 1.69 and 1.66 per cent.—*Ibid.* p. 898.

Vanderkleed, Chas. E., reports 7 assays of veratrum, lowest 1.580, highest 2.250 per cent alkaloids; all above standard.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

Githens and Vanderkleed present a comparison of the results obtained by physiological standardization of veratrum with results obtained by chemical assay.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 923. See also Am. J. Pharm. 1910, v. 82, p. 465.

Wood, H. C., Jr., in a report on physiological assays, states that the toxic power of this drug is not of any great practical importance.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 940.

Dohme and Engelhardt state that the Ph. Hung. III directs that tincture of veratrum contain 1.6 per cent of extractive matter.—*Ibid.* p. 1194.

Havenhill, L. D., outlines a modified formula for tincture of veratrum.—*Ibid.* p. 792.

Sayre, L. E., reports on 2 samples of tincture of veratrum viride: 1 passed; 1 illegal.—*Ibid.* p. 1098.

Beringer, George M., asserts that physicians fail to get results from the official tincture of veratrum and suggests that there be introduced a concentrated tincture of veratrum viride made 50 per cent drug strength.—*Ibid.* p. 783.

Osborne, Oliver T., would omit veratrum its tincture and fluid extract from the Pharmacopœia, because of its similarity to aconite.—J. Am. M. Ass. 1910, v. 54, p. 468.

Monroe, A. Leight, quotes J. B. Brown who points out that veratrum viride is indicated in cases of endocarditis when the pulse is full and bounding, with high fever.—Hahnemann, Month. 1910, v. 45, p. 715.

Heeve, Wm. L., asserts that veratrum is an ideal remedy for uræmic convulsions, but we can expect very little from it during the interim. When indicated, it is ideal.—Eclectic M. J. 1910, v. 70, pp. 122–123.

Adams, F. X., points out that the indications for veratrum viride are: full hard pulse. It will relieve the nervous tension present and reduce the temperature but does not relieve capillary stasis. Hypodermically it is recommended in puerperal convulsions.—*Ibid.* p. 73.

VIBURNUM OPULUS.

LaWall and Bradshaw report finding 3.35 per cent ash in viburnum opulus.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Osborne, Oliver T., thinks that viburnum opulus and its fluid extract should be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 377.

Adams, F. X., points out that viburnum is indicated by; crampy condition of bowels at the menstrual period. Cramps come quickly and disappear quickly. Tongue not contracted, red on tip and edges. When the hand is placed on the abdomen the internal organs appear to be in motion. Flatulency absent. This is one of our best remedies in dysmenorrhœa and after pains, but is also good with above indications in the male sex.—Eclectic M. J. 1910, v. 70, p. 74.

VIBURNUM PRUNIFOLIUM.

LaWall and Bradshaw report finding 7.30 per cent ash in viburnum prunifolium.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

VINA.

Dohme and Engelhardt state that only Tokay wine is official in the Ph. Hung. III and that should contain 15 per cent of alcohol.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1194.

The Chemist and Druggist (1910, v. 77, p. 899) notes that a peculiar feature of the Ph. Germ. V monograph on wine is that only a brief description is given with the remark that the preparation must meet the requirements set forth in the special laws affecting this substance.

Wilbert, M. I., presents a table showing the recognition accorded to wine and distilled liquors in the several national pharmacopœias.—Am. J. Pharm. 1910, v. 82, p. 449.

Table showing the recognition accorded to wine and distilled liquors in the several national pharmacopœias.

	British.	German.	French.	Swiss.	Dutch.	Austrian.	Belgian.	Hungarian.	Japanese.	Spanish.	Swedish.	Italian.	Danish.	United States.
Brandy......	+	+	○	+	○	+	○	○	○	○	○	+	○	+
Rum.........	○	○	○	+	○	○	○	○	○	○	○	○	○	○
Whisky......	○	○	○	○	○	○	○	○	○	○	○	○	○	+
Wine........	+	+*	(?)	+	+	+	+*	+	+*	+*	+	+	(?)	+

* Contain a general descriptive article, but no standards.
(?) Contain only a general article, but no tests.

F. I. D. 120 and 122 refer to labeling of wines produced in the United States.

Husmann, George C., reports grape investigations in the grape growing regions of the United States, with reference to resistant stocks, direct producers and viniferas.—Bull. No. 172, Bur. Plant Ind. U. S. Dept. Agric. 1910, pp. 86.

Hedgcock, George G., reports field studies of the crown gall of the grape.—Bull. No. 183, *Idem.*

Günther, Adolf, presents the report on the official wine statistics for the fiscal year 1908–1909. The report includes the details of the examination of 682 samples of wine and 4,855 samples of must.—Arb. a. d. k. Gsndhtsamte, 1910, v. 35, pp. 1–429.

Malvezin, Ph., presents a new method for the estimation of the dry extract in wines.—Ann. chim. analyt. 1910, v. 15, p. 135.

See also Bull. Soc. chim. France, 1910, v. 7, pp. 699–703.

Charles, P., discusses the innocuousness of sulphurous acid in wines.—Ann. chim. analyt. 1910, v. 15, pp. 419–421, 998–1001, and Rép. pharm. 1910, v. 22, pp. 339–341.

Fonzes-Diacon presents a note on the employment of urotropin as a desulphurizer of musts and wines.—Bull. Soc. chim. France, 1910, v. 7, p. 389.

Blarez, Ch., presents a method for the detection of urotropin in wines. He thinks that, while his method does not absolutely solve the question for very small quantities, it is nevertheless useful.—Bull. Soc. pharm. Bordeaux, 1910, v. 50, pp. 49–53.

See also Voisenet.—Ann. chim. analyt. 1910, v. 15, p. 266.

Hubert and Alba discuss the detection of sulphuric and phosphoric acids in wines.—*Ibid.* pp. 223–228.

Duboux, Marcel, discusses the physico-chemical determination of lime and wine.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 592–597.

See also Dutoit and Duboux.—Ann. chim. analyt. 1910, v. 15, pp. 333–338, 453–465, and H. Pellet.—*Ibid.* p. 385.

Dutoit and Duboux present some additional observations on the acidity of wines.—Schweiz. Wchnschr. Chem. u. Pharm. 1910, v. 48, pp. 133–141.

Béys, C., describes a new method for the estimation of glycerin in wines.—Compt. rend. Acad. Sc. 1910, v. 151, p. 80.

Trillat, A., presents a study of the causes favoring the formation af acetic aldehyde in wine.—Bull. Soc. chim. France, 1910, v. 7, pp. 71–78.

See also Trillat and Sauton.—*Ibid.* pp. 244–249.

Heide and Jakob discuss the detection of benzoic acid, cinnamic acid and salicylic acid in wines.—Ztschr. Unters. Nahr. u. Genussm. 1910, v. 19, pp. 137–153.

Lythgoe, Hermann C., reports the examination of 38 samples of wine, 10 of which were reported adulterated by reason of the presence of sulphur dioxide.—Rep. Massachusetts Bd. Health, 1910, p. 360.

Additional references on the origin, production, adulteration and examination of wines will be found in Chem. Abstr., Ann. Falsif., Ann. chim. analyt., and Index Medicus.

VINA MEDICATA.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5 [1910], 1911, p. 60) point out that under the title "Vina medicata" the Ph. Germ. V includes a general article on medicated wines.

Loock reviews the requirements for medicinal wine established in Germany.—Ztschr. öffentl. Chem. 1910, v. 16, pp. 336–341.

An unsigned article (Southern Pharm. J. 1909–10, v. 2, pp. 468–469) discusses the wines of the Pharmacopœia and of the National Formulary.

Diagram showing the comparative compliance, in 1902 and in 1910, with the general requirements of the international treaty of Brussels providing that "no potent drug shall be directed to be prepared in the form of a medicinal wine."

[– – – – Before, ++++ After the Revision of the Pharmacopœia.]

International requirement,	1902	++++++++++++++++++++
United States (1905)	1902	– – – – – – – – – –
	1910	++++++++++
Spanish (1905),	1902	– – – – – – – – – – – –
	1910	++++++++++++++++
Dutch (1905),	1902	– – – – – – – – – – – –
	1910	++++++++++++++++
Japanese (1906),	1902	– – – – – – – – – – – – – –
	1910	++++++++++++++
Austrian (1906),	1902	– – – – – – – – – – – – – – – – – –
	1910	++++++++++++++++++++
Belgian (1906),	1902	– – – – – – – – – –
	1910	++++++++++++++++++++
Danish (1907),	1902	– – – – – – – – – – – – – – – –
	1910	++++++++++++++++++++
Swiss (1907),	1902	– – – – – – – – – – – – – – – – – –
	1910	++++++++++++++++++
Swedish (1908),	1902	– – – – – – – – – – – – – –
	1910	++++++++++++++++++
Servian (1908),	1902	– – – – – – – – – – – – – – – – – –
	1910	++++++++++++++++++++
French (1908),	1902	– – – – – – – –
	1910	++++++++++++++++
Italian (1910),	1902	– – – – – – – – – – – – – – – –
	1910	++++++++++++++++++
Hungarian (1909),	1902	– – – – – – – – – – – – – – – – – –
	1910	++++++++++++++++++++
Russian (1910),	1902	– – – – – – – – – – – – – – – –
	1910	++++++++++++++++++++
German (1910),	1902	– – – – – – – – – – – – – –
	1910	++++++++++++++++++++

The members of the New England Branch of the A. Ph. A. think that medicinal wines being likely to vary in color and taste and not being largely used, could readily be dropped.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 150.

Wilbert, M. I., thinks that the provision of the Brussels Protocol that no extractive preparation of a potent drug be directed to be prepared in the form of a medicinal wine is a reasonable one, in view of the variation in alcohol strength of wines of different origin.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1145.

The Budapest Correspondent (Lancet, 1910, v. 176, p. 961) notes that vinum colchici is omitted from the Ph. Hung. III because the International Congress held at Brussels in 1902 did not sanction the preparation of powerful drugs in the form of wines.

VINUM CARNIS ET FERRI N. F.

Sayre, L. E., calls attention to the fact that the Federal authorities are requiring that the preparation known as "Beef, Wine and Iron," official in the N. F., be brought up to the standard.—Bull. Kansas Bd. Health, 1910, v. 6, p. 244.

Ruddiman and Kebler discuss the analysis of beef, iron and wine and present a table showing the results of examination of commercial samples as compared with results made up according to the National Formulary, using commercial beef extracts.—Proc. Ass. Off. Agric. Chem. 1910, 27th Ann. Conv. pp. 194–197. (Bull. Bur. Chem., U. S. Dept. Agric. 1911, No. 137.)

Ruddiman, E. A., in a discussion of beef, iron and wine, states that the difficulty of estimating the nitrogen of ammonium compounds in the presence of extract of beef is due to the fact that the extract contains compounds which are easily decomposed, forming other compounds that act like ammonia.—Am. Druggist, 1910, v. 57, p. 304.

Sayre, L. E., reports on 25 samples of beef, iron and wine: 14 passed; 11 illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1095.

McGill, A. (Bull. 206, Lab. Inland Rev. Dept., Ottawa, Can.) reports the examination of 76 samples of beef, iron and wine. The composition varied as follows: total solids, 7.20 to 26.22; nitrogen, 0.002 to 0.322; ash, 0.180 to 1.488; iron oxide, 0.05 to 0.48; alcohol by volume, 8.30 to 23.01.—Chem. Abstr. 1910, v. 4, p. 2864.

XANTHOXYLUM.

LaWall and Bradshaw report finding 5.0 per cent ash in xanthoxylum.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 754.

Leming, W., says the specific indications for xanthoxylum are: catarrhal conditions of mucous membranes, with sluggish capillary circulation, nervous depression, general atonicity; chronic dyspepsia, with moist, general coated tongue, hypersecretion and flatulency.—Eclectic M. J. 1910, v. 70, p. 581.

ZEA.

Osborne, Oliver T., asserts that zea might well be omitted from the Pharmacopœia.—J. Am. Ass. 1910, v. 54, p. 377.

ZINCI ACETAS.

Seidell, Atherton, reports experimental determinations on the solubility of zinc acetate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 44.5 gm., and 100 gm. of U. S. P. alcohol will dissolve 4.3 gm. of zinc acetate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 21–23, 91.

Spear, Wells and Dyer discuss several methods for the electrolytic determination of zinc.—J. Am. Chem. Soc. 1910, v. 32, pp. 530–533.

Spear, Ellwood B., comments on the causes of the high results in the electrolytic determination of zinc and concludes that the true cause is the deposition of zinc oxide or hydroxide with the zinc.—*Ibid.* pp. 533–538.

The Budapest Correspondent (Lancet 1910, v. 178, p. 961) notes that zinc acetate has been omitted from the Ph. Hung. III as being obsolete.

Osborne, Oliver T., asserts that zinc sulphate is the best preparation for local use and there seems to be no necessity for the acetate which acts very similarly.—J. Am. M. Ass. 1910, v. 54, p. 133.

ZINCI BROMIDUM.

Osborne, Oliver T., asserts that zinc bromide is not needed in the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 133.

ZINCI CHLORIDUM.

Osborne, Oliver T., states that zinc chloride is an escharotic and liquor zinci chloridi is a disinfectant. Both are probably not needed in the next Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 133.

ZINCI IODIDUM.

Osborne, Oliver T., asserts that zinc iodide is not needed in the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 133.

ZINCI OXIDUM.

Simm and Simm, in U. S. patent 946,688, describe and illustrate an apparatus for the production of zinc oxide.—J. Ind. & Eng. Chem. 1910, v. 2, p. 110.

Riedel's Berichte (1910, p. xxix) suggests the permissibility of a slight effervescence on solution in acid, as zinc oxide is never entirely free from carbonates.

Beilstein, Christian, reports that 9 samples of zinc oxide were tested for fineness, by shaking on silk bolting cloth having 80 meshes to the inch. The residues ranged from 5 per cent to 32 per cent.—Proc. N. W. D. A. 1910, p. 104.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 79) report that zinc oxide is usually freer from lead than formerly, ranging in the past year from 0.02 to 0.1 per cent. One sample contained an excessive amount of sulphide, and another as much as 200 parts per million of arsenic.

Dohme and Engelhardt state that the Ph. Hung. III ingredients for the ointment of zinc oxide are: White wax, 25 parts, liquid petrolatum, 225 parts, anhydrous wool-fat, 225 parts, zinc oxide, 25 parts.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1194.

The members of the New England Branch of the A. Ph. A. think that zinc oxide ointment should have a base of wool-fat and petrolatum to replace lard.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 150.

Thome, E. R., asserts that in warm weather 10 per cent white wax may be necessary and should therefore be permitted.—Practical Druggist, 1910, v. 28, p. 123.

Sayre, L. E., reports on 1 sample of zinc oxide ointment: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.

Lythgoe, Hermann C., reports finding 2 samples of adulterated zinc oxide ointment; these contained 23 per cent and 18 per cent of the required amount of zinc oxide.—Rep. Massachusetts Bd. Health, 1910, p. 372.

Ulsaver, E. S., reports on the use of zinc oxide and oil of cloves as a temporary filling for sensitive cavities and for children's teeth where the pulps are exposed.—Dental Digest, 1910, v. 16, p. 631.

Lemaire, Paul, reviews the history of zinc peroxide, gives tabulated analytical results with reference to 15 samples purchased in the past five years, notes its great variability and calls upon the pharmacopœial commission to fix officially the strength of the zinc peroxide to be used in practice.—Rép. pharm. 1910, v. 22, pp. 1–4.

ZINCI PHENOLSULPHONAS.

Seidell, Atherton, reports experimental determinations on the solubility of zinc phenolsulphonate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 66.1 gm., and 100 gm. of U. S. P. alcohol will dissolve 72.1 gm. of zinc phenolsulphonate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 56–58, 91.

Osborne, Oliver T., asserts that zinc phenolsulphonate has been superseded as an intestinal antiseptic and is probably rarely used externally.—J. Am. M. Ass. 1910, v. 54, p. 133.

ZINCI STEARAS.

Hoffman, C. E., reports examining 4 samples of zinc stearate, two of which on ignition left a residue of 15.5, one 11.4, and the fourth 9 per cent. The stearic acid liberated from the third had a melting point of 60° and that from the fourth was yellow in color and melted at 72°.—Am. J. Pharm. 1910, v. 82, p. 243.

Mittelbach, Wm., thinks that the ointment of zinc stearate made with benzoinated lard will be quite an improvement on the present formula.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 793.

Osborne, Oliver T., thinks it absurd to put zinc stearate, which is an oily powder which adheres to the skin, into an official ointment. It can have no action different from zinc oxide and should therefore be omitted.—J. Am. M. Ass. 1910, v. 54, p. 51.

ZINCI SULPHAS.

Beilstein, Christian, reports that 4 samples of zinc sulphate contained from 0.003 to 0.23 per cent chlorides, computed as chlorine.—Proc. N. W. D. A. 1910, p. 104.

Woolsey, J. F., reports that considerable chloride is usually present in zinc sulphate supposedly of pharmacopœial quality.—Proc. Pennsylvania Pharm. Ass. 1910, p. 146.

Sayre, L. E., reports on 1 sample of zinc sulphate: illegal.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 1098.

E. Merck's Annual Report (1910, Darmstadt, 1911, v. 24, p. 376) calls attention to a paper by Ganassini (Rev. pharm. Flandres, 1909, p. 361) who shows zinc sulphate to be a very sensitive test for uric acid.

ZINCI VALERAS.

Seidell, Atherton, reports experimental determinations on the solubility of zinc valerate in aqueous alcohol solutions. He finds that at 25°, 100 gm. of water will dissolve 1.46 gm., and 100 gm. of U. S. P. alcohol will dissolve 5.82 gm. of zinc valerate.—Bull. No. 67, Hyg. Lab. U. S. P. H. & M.-H. S. 1910, pp. 90, 91.

Evans Sons Lescher & Webb (Analytical Notes, 1910, p. 79) report that 4 samples of zinc valerianate left an ash of zinc oxide varying from 25.1 to 30 per cent. Butyric acid was practically absent in each case.

The Budapest Correspondent (Lancet 1910, v. 178, p. 961) notes that zinc valerianate has been omitted from the Ph. Hung. III as being obsolete.

Osborne, Oliver T., thinks that zinc valerate might well be omitted from the Pharmacopœia.—J. Am. M. Ass. 1910, v. 54, p. 468.

ZINGIBER.

Tunmann, O., asserts that the chief varieties of ginger are Bengal, Cochin, Japan, China, Jamaica and West Africa; the chief market for ginger is London. He also presents some additional data relating to the amount of ginger produced and available.—Apoth. Ztg. 1910, v. 25, p. 550.

Caesar & Loretz (Jahres-Ber. 1910, p. 51) intimate that Bengal and Cochin ginger are the varieties most frequently met with in the European market.

Dreher, Julius D., reports that, for the six months ending September 30, 1910, out of a total of 1,707,328 pounds of ginger exported from Jamaica, 720,272 pounds went to the United States.—Cons. & Tr. Rep. 1910, p. 1085.

Caesar & Loretz (Pharm.-Ber. D. A. B. 5, [1910], 1911, p. 52) point out that the Ph. Germ. V recognizes the Bengal variety of ginger and requires that it contain not more than 7 per cent of ash.

LaWall and Bradshaw report finding 3.75 per cent ash in Jamaica ginger and from 4.2 to 5.55 per cent ash in African ginger.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 753.

Evans, J., points out that when ground ginger is examined microscopically the appearance is one of predominating starch granules. These granules are so characteristic in shape and appearance that they are readily distinguished from adulterants. Among the starch granules are scattered the cortical and vascular tissue, whereas in the lower grades it is present to a large extent.—Brit. & Col. Drug. 1910, v. 57, p. 133.

Vanderkleed, Chas. E., reports 1 assay of African ginger, 10.12 per cent oleoresin, and 2 assays of Jamaica, 5.636 and 6.316 per cent oleoresin.—Proc. Pennsylvania Pharm. Ass. 1910, p. 147.

LaWall, Charles H., asserts that a test for capsicum should be included in the requirements for oleoresin of ginger. Many commercial samples used in making ginger ale extracts contain capsicum and these occasionally find their way into the pharmaceutical trade.—Am. J. Pharm. 1910, v. 82, p. 25.

Chace, E. M., in the referee report on flavoring extracts, outlines tests for ginger extract.—Proc. Ass. Off. Agric. Chem. 1910, 27th Ann. Conv., p. 75. (Bull. Bur. Chem. U. S. Dept. Agric. 1911, No. 137.)

See also Street and Morison.—*Ibid.* pp. 76–79.

LaWall, Charles H., asserts that a test for the presence of capsicum in tincture and in fluid extract of ginger is advisable. He presents a test which he has found satisfactory.—Am. J. Pharm. 1910, v. 82, p. 22.

Havenhill, L. D., outlines a modified formula for tincture of ginger.—Proc. Am. Pharm. Ass. 1910, v. 58, p. 792.

Table showing some of the analytical results reported in connection with tincture of ginger.

Reporters.	Number of samples—		References.
	Examined.	Rejected.	
Sayre, L. E	68	34	Proc. Am. Pharm. Ass. 1910, v. 58, p. 1096.
Potter, Hubert F	3	2	Rep. Connecticut Dairy and Food Com., 1910, Hartford, 1911, p. 126.
Havenhill, L. D	59	19	Proc. Kansas Pharm. Ass. 1910, p. 58.
Lythgoe, Hermann C	10	0	Rep. Massachusetts Bd. Health 1910, pp. 370–371.
Howard, C. D	1	1	New Hampshire San. Bull. 1910, v. 3, p. 182.
Local Government Board (Scotland).	43	1	Pharm. J. 1910, v. 31 (85), p. 65.

The members of the New England Branch of the A. Ph. A. think that a soluble tincture for the preparation of syrup of ginger would be desirable.—Bull. Am. Pharm. Ass. 1910, v. 5, p. 150.

Meyer, Charles E., describes a new, novel and original process for making syrup of ginger. He eliminates the alcohol entirely and believes this to be a distinct advantage to the permanency of the finished product.—Proc. Missouri Pharm. Ass. 1910, p. 94.

Osborne, Oliver T., thinks it doubtful if fluid extract of ginger is needed, or the oleoresin; the tincture and the syrup are sufficient.—J. Am. M. Ass. 1910, v. 54, p. 291.

LIST OF HYGIENIC LABORATORY BULLETINS OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

The Hygienic Laboratory was established in New York, at the Marine-Hospital on Staten Island, August, 1887. It was transferred to Washington, with quarters in the Butler Building, June 11, 1891, and a new laboratory building, located in Washington, was authorized by act of Congress, March 3, 1901.

The following *bulletins* [Bulls. Nos. 1–7, 1900 to 1902, Hyg. Lab., U. S. Mar.-Hosp. Serv., Wash.] have been issued:

* No. 1.—Preliminary note on the viability of the *Bacillus pestis*. By M. J. Rosenau.

No. 2.—Formalin disinfection of baggage without apparatus. By M. J. Rosenau.

* No. 3.—Sulphur dioxid as a germicidal agent. By H. D. Geddings.

* No. 4.—Viability of the *Bacillus pestis*. By M. J. Rosenau.

No. 5.—An investigation of a pathogenic microbe (*B. typhi murium* Danyz) applied to the destruction of rats. By M. J. Rosenau.

* No. 6.—Disinfection against mosquitoes with formaldehyde and sulphur dioxid. By M. J. Rosenau.

* No. 7.—Laboratory technique: Ring test for indol, by S. B. Grubbs and Edward Francis; Collodium sacs, by S. B. Grubbs and Edward Francis; Microphotography with simple apparatus, by H. B. Parker.

By act of Congress approved July 1, 1902, the name of the "United States Marine-Hospital Service" was changed to the "Public Health and Marine-Hospital Service of the United States," and three new divisions were added to the Hygienic Laboratory.

Since the change of name of the service the bulletins of the Hygienic Laboratory have been continued in the same numerical order, as follows:

* No. 8.—Laboratory course in pathology and bacteriology. By M. J. Rosenau. (Revised edition, March, 1904.)

* No. 9.—Presence of tetanus in commercial gelatin. By John F. Anderson.

* No. 10.—Report upon the prevalence and geographic distribution of hookworm disease (uncinariasis or anchylostomiasis) in the United States. By Ch. Wardell Stiles.

* No. 11.—An experimental investigation of *Trypanosoma lewisi*. By Edward Francis.

* No. 12.—The bacteriological impurities of vaccine virus; an experimental study By M. J. Rosenau.

* No. 13.—A statistical study of the intestinal parasites of 500 white male patients at the United States Government Hospital for the Insane; by Philip E. Garrison, Brayton H. Ransom, and Earle C. Stevenson. A parasitic roundworm (*Agamomermis culicis* n. g., n. sp.) in American mosquitoes (*Culex sollicitans*); by Ch. Wardell Stiles. The type species of the cestode genus *Hymenolepis;* by Ch. Wardell Stiles.

* No. 14.—Spotted fever (tick fever) of the Rocky Mountains; a new disease. By John F. Anderson.

* No. 15.—Inefficiency of ferrous sulphate as an antiseptic and germicide. By Allan J. McLaughlin.

* No. 16.—The antiseptic and germicidal properties of glycerin. By M. J. Rosenau.

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA

* No. 17.—Illustrated key to the trematode parasites of man. By Ch. Wardell Stiles.

* No. 18.—An account of the tapeworms of the genus *Hymenolepis* parasitic in man, including reports of several new cases of the dwarf tapeworm (*H. nana*) in the United States. By Brayton H. Ransom.

* No. 19.—A method for inoculating animals with precise amounts. By M. J. Rosenau.

* No. 20.—A zoological investigation into the cause, transmission, and source of Rocky Mountain "spotted fever." By Ch. Wardell Stiles.

* No. 21.—The immunity unit for standardizing diphtheria antitoxin (based on Ehrlich's normal serum). Official standard prepared under the act approved July 1, 1902. By M. J. Rosenau.

* No. 22.—Chloride of zinc as a deodorant, antiseptic, and germicide. By T. B. McClintic.

* No. 23.—Changes in the Pharmacopœia of the United States of America. Eighth Decennial Revision. By Reid Hunt and Murray Galt Motter.

No. 24.—The International Code of Zoological Nomenclature as applied to medicine. By Ch. Wardell Stiles.

* No. 25.—Illustrated key to the cestode parasites of man. By Ch. Wardell Stiles.

* No. 26.—On the stability of the oxidases and their conduct toward various reagents. The conduct of phenolphthalein in the animal organism. A test for saccharin, and a simple method of distinguishing between cumarin and vanillin. The toxicity of ozone and other oxidizing agents to lipase. The influence of chemical constitution on the lipolytic hydrolysis of etheral salts. By J. H. Kastle.

* No. 27.—The limitations of formaldehyde gas as a disinfectant with special reference to car sanitation. By Thomas B. McClintic.

* No. 28.—A statistical study of the prevalence of intestinal worms in man. By Ch. Wardell Stiles and Philip E. Garrison.

* No. 29.—A study of the cause of sudden death following the injection of horse serum. By M. J. Rosenau and John F. Anderson.

* No. 30.—I. Maternal transmission of immunity to diphtheria toxine. II. Maternal transmission of immunity to diphtheria toxine and hypersusceptibility to horse serum in the same animal. By John F. Anderson.

* No. 31.—Variations in the peroxidase activity of the blood in health and disease. By Joseph H. Kastle and Harold L. Amoss.

* No. 32.—A stomach lesion in guinea pigs caused by diphtheria toxine and its bearing upon experimental gastric ulcer. By M. J. Rosenau and John F. Anderson.

* No. 33.—Studies in experimental alcoholism. By Reid Hunt.

* No. 34.—I. *Agamofilaria georgiana* n. sp., an apparently new roundworm parasite from the ankle of a negress. II. The zoological characters of the roundworm genus *Filaria* Mueller, 1787. III. Three new American cases of infection of man with horse-hair worms (species *Paragordius varius*), with summary of all cases reported to date. By Ch. Wardell Stiles.

* No. 35.—Report on the origin and prevalence of typhoid fever in the District of Columbia. By M. J. Rosenau, L. L. Lumsden, and Joseph H. Kastle. (Including articles contributed by Ch. Wardell Stiles, Joseph Goldberger, and A. M. Stimson.)

* No. 36.—Further studies upon hypersusceptibility and immunity. By M. J. Rosenau and John F. Anderson.

* No. 37.—Index-catalogue of medical and veterinary zoology. Subjects: Trematoda and trematode diseases. By Ch. Wardell Stiles and Albert Hassall.

No. 38.—The influence of antoxin upon post-diphtheritic paralysis. By M. J. Rosenau and John F. Anderson.

* No. 39.—The antiseptic and germicidal properties of solutions of formaldehyde and their action upon toxines. By John F. Anderson.

* No. 40.—1. The occurrence of a proliferating cestode larva (*Sparganum proliferum*) in man in Florida, by Ch. Wardell Stiles. 2. A reexamination of the type specimen of *Filaria restiformis* Leidy, 1880=*Agamomermis restiformis*, by Ch. Wardell Stiles. 3. Observations on two new parasitic trematode worms *Homalogaster philippinensis* n. sp., *Agamodistomum nanus* n. sp., by Ch. Wardell Stiles and Joseph Goldberger. 4. A reexamination of the original specimen of *Tænia saginata abietina* (Weinland, 1858), by Ch. Wardell Stiles and Joseph Goldberger.

* No. 41.—Milk and its relation to the public health. By various authors.

* No. 42.—The thermal death points of pathogenic micro-organisms in milk. By M. J. Rosenau.

* No. 43.—The standardization of tetanus antitoxin (an American unit established under authority of the act of July 1, 1902). By M. J. Rosenau and John F. Anderson.

No. 44.—Report No. 2 on the origin and prevalence of typhoid fever in the District of Columbia, 1907. By M. J. Rosenau, L. L. Lumsden, and Joseph H. Kastle.

No. 45.—Further studies upon anaphylaxis. By M. J. Rosenau and John F. Anderson.

No. 46.—*Hepatozoon perniciosum* (n. g., n. sp.); a hæmogregarine pathogenic for white rats; with a description of the sexual cycle in the intermediate host, a mite (*Lelaps echidninus*). By W. W. Miller.

* No. 47.—Studies on Thyroid: I. The relation of iodine to the physiological activity of thyroid preparations. By Reid Hunt and Atherton Seidell.

No. 48.—The physiological standardization of digitalis. By Charles Wallis Edmunds and Worth Hale.

No. 49.—Digest of comments on the United States Pharmacopœia. Eighth decennial revision for the period ending December 31, 1905. By Murray Galt Motter and Martin I. Wilbert.

No. 50.—Further studies upon the phenomenon of anaphylaxis. By M. J. Rosenau and John F. Anderson.

No. 51.—Chemical tests for blood. By Joseph H. Kastle.

No. 52.—Report No. 3 on the origin and prevalence of typhoid fever in the District of Columbia (1908). By M. J. Rosenau, Leslie L. Lumsden, and Joseph H. Kastle.

No. 53.—The influence of certain drugs upon the toxicity of acetanilide and antipyrine. By Worth Hale.

No. 54.—The fixing power of alkaloids on volatile acids and its application to the estimation of alkaloids with the aid of phenolphthalein or by the Volhard method. By Elias Elvove.

No. 55.—Quantitative pharmacological studies: Adrenalin and adrenalin-like bodies. By W. H. Schultz.

No. 56.—Milk and its relation to the public health. (Revised edition of Bulletin No. 41.) By various authors.

* No. 57.—I. The presence of tubercule bacilli in the circulating blood in clinical and experimental tuberculosis. By John F. Anderson. II. The viability of the tubercle bacillus. By M. J. Rosenau.

No. 58.—Digest of comments on the Pharmacopœia of the United States of America (eighth decennial revision) and the National Formulary for the period ending December 31, 1906. By Murray Galt Motter and Martin I. Wilbert.

No. 59.—The oxidases and other oxygen catalysts concerned in biological oxidation. By Joseph Hoeing Kastle.

No. 60.—A study of the anatomy of *Watsonius* (n. g.) *watsoni* of man, and of 19 allied species of mammalian tremotode worms of the superfamily Paramphistomoidea. By Ch. Wardell Stiles and Joseph Goldberger.

No. 61.—Quantitative pharmacological studies: Relative physiological activity of some commercial solutions of epinephrin. By W. H. Schultz.

No. 62.—The taxonomic value of the microscopic structure of the stigmal plates in the tick genus Dermacentor. By Ch. Wardell Stiles.

* No. 63.—Digest of comments on the Pharmacopœia of the United States of America (eight decennial revision) and the National Formulary (third edition) for the calendar year ending December 31, 1907. By Murray Galt Motter and Martin I. Wilbert.

No. 64.—Studies upon anaphylaxis with special reference to the antibodies concerned. By John F. Anderson and W. H. Frost.

* No. 65.—Facts and problems of rabies. By A. M. Stimson.

No. 66.—I. The influence of age and temperature on the potency of diphtheria antitoxin. By John F. Anderson. II. An organism (*Pseudomonas protea*) isolated from water, agglutinated by the serum of typhoid-fever patients. By W. H. Frost. III. Some considerations on colorimetry, and a new colorimeter. By Norman Roberts. IV. A gas generator, in four forms, for laboratory and technical use. By Norman Roberts.

* No. 67.—The solubilities of the pharmacopœial organic acids and their salts. By Atherton Seidell.

No. 68.—The bleaching of flour and the effect of nitrites on certain medicinal substances. By Worth Hale.

No. 69.—The effect of a restricted diet and of various diets upon the resistance of animals to certain poisons. By Reid Hunt.

No. 70.—A study of melting-point determinations with special reference to the melting-point requirements of the United States Pharmacopœia. By George A. Menge.

No. 71.—I. Some known and three new endoparasitic trematodes from American fresh-water fish. By Joseph Goldberger. II. On some new parasitic trematode worms of the genus *Telorchis*. By Joseph Goldberger. III. A new species of *Athesmia* from a monkey. By Joseph Goldberger and Charles G. Crane.

* No. 72.—I. Report on an outbreak of typhoid feverat Omaha, Nebr. (1909–1910). By L. L. Lumsden. II. The water supply of Williamson, W. Va., and its relation to an epidemic of typhoid fever. By W. H. Frost.

No. 73.—The effects of a number of derivatives of choline and analogous compounds on the blood pressure. By Reid Hunt and R. de M. Taveau.

* No. 74.—Digitalis standardization and the variability of crude and of medicinal preparations. By Worth Hale.

No. 75.—Digest of comments on the Pharmacopœia of the United States of America (eighth decennial revision) and the National Formulary (third edition) for the calendar year ending December 31, 1908. By Murray Galt Motter and Martin I. Wilbert.

* No. 76.—The Physiological Standardization of Ergot. By Charles Wallis Edmunds and Worth Hale.

No. 77.—Sewage Pollution of Interstate Waters and International Waters with special reference to the spread of typhoid fever. I. Lake Erie and the Niagara River. By Alan J. McLaughlin.

No. 78.—Report No. 4 on the origin and prevalence of typhoid fever in the District of Columbia (1909). By L. L. Lumsden and John F. Anderson.

* No. 79.—Digest of Comments on the Pharmacopœia of the United States of America (eighth decennial revision) and the National Formulary (third edition) for the calendar year ending December 31, 1909. By Murray Galt Motter and Martin I. Wilbert.

* No. 80.—Physiological Studies in Anaphylaxis. Reaction of smooth muscle from various organs of different animals to proteins. (Including reaction of muscle from nonsensitized, sensitized, tolerant and immunized guinea-pigs). By W. H. Schultz.

No. 81.—Tissue Proliferation in Plasma Medium. By John Sundwall.

No. 82.—Method of Standardizing Disinfectants with and without Organic matter. By John F. Anderson and Thomas B. McClintic. The Demonstration of the Phenol Coefficient of Some Commercial Disinfectants. By Thomas B. McClintic.

No. 83.—Sewage Pollution of Interstate and International Waters with special reference to the spread of typhoid fever. II. Lake Superior and St. Marys River. III. Lake Michigan and the Straits of Mackinac. IV. Lake Huron, St. Clair River, Lake St. Clair, and the Detroit River. V. Lake Ontario and St. Lawrence River. By Allan J. McLaughlin.

No. 84.—Digest of Comments on the Pharmacopœia of the United States of America (eighth decennial revision) and the National Formulary (third edition) for the calendar year ending December 31, 1910. By Murray Galt Motter and Martin I. Wilbert.

In citing these bulletins, beginning with No. 8, bibliographers and authors are requested to adopt the following abbreviations: Bull. No. ——, Hyg. Lab., U. S. Pub. Health & Mar.-Hosp. Serv., Wash., pp. ——.

MAILING LIST.

The Service will enter into exchange of publications with medical and scientific organizations, societies, laboratories, journals, and authors. ALL APPLICATIONS FOR THESE PUBLICATIONS SHOULD BE ADDRESSED TO THE **"Surgeon General, U. S. Public Health and Marine-Hospital Service, Washington, D. C.,"** EXCEPT THOSE MARKED (*).

The editions of the publications marked (*) are no longer available for distribution by the Surgeon General of the Public Health and Marine-Hospital Service. Copies in some instances may, however, be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., who sells publications at cost, and to whom requests for publications thus marked should be made.

○

UNIVERSITY OF ILLINOIS-URBANA
3 0112 106520171